

Summary

Research and Data Science Professional with success utilizing data to build pragmatic, scalable, and statistically accurate solutions for dynamic data and business requirements. Strengths include defining problem statements, collecting data, building and maintaining data driven optimization models and presenting recommendations to cross functional stakeholders. A reputation for performing data extractions and analysis while working in a fast paced, deadline driven environment.

Education

Johns Hopkins University, Whiting School of Engineering, Baltimore, MD 2021

M.S. Data Science

California State University, Long Beach, Long Beach, CA

M.A. Neuroscience 2010

B.A. Psychology 2007

Technology Skills

R, Python, Jupyter Notebook, SQL, Tableau, QlikView, Adobe Photoshop, Adobe Illustrator, Amazon Web Services, NeuroLucida, Machine Learning Models, Regression, Distributed Database Systems, Recommendation Systems

Professional Experience

MJxC, Beaufort, SC December 2021-Present

Data Scientist, Independent Contractor

Lead the Machine Learning and Data Platform strategy and vision to enable individualized and adaptive fitness coaching to all members of the platform.

- Partner closely with the Founders, engineering, product, and other cross-functional teams to create the product roadmap and to define milestones and success metrics.
- Lead engineering function in the areas of Machine Learning and Data methodologies with clarity on feasibility, time, cost, and impact.
- Define best practices around Machine Learning and Data methodologies, software development, and infrastructure.
- Identify opportunities and challenges in the marketplace with constant evaluation of Machine Learning Data advancements and innovations.

Beaufort Memorial Hospital, Beaufort, SC December 2014-Present

Senior Wellness Coach, Programs Coordinator

Fulfill a need for the Wellness Center to identify trends and patterns required to improve operating efficiencies for this nonprofit healthcare facility.

- Use R coding for statistical computing and data mining for data analysis.
- Build an Executive dashboard and implement trend analysis for C-suite and Department Directors to identify trends in departments including finance, primary care, and intensive care.
- Use analytics to assess client needs, set goals, and facilitate each client's progress to reach their goals.
- Perform fitness and health assessments combined with behavioral and motivational interviewing techniques to develop exercise recommendations.
- Results improve client mobility, stability, strength, endurance, power, technique, and performance.
- Leverage experience and knowledge of statistics and neuroscience to help implement training programs and exercise instructions for special needs populations.
- Apply behavioral analytics to analyze frequency, duration, and latency of high-risk behavior and apply linear regression analysis to identify limiting factors for strategic planning and setting client goals.
- Analyze results of statistical reports and identify areas to enhance programs and growth.
- Within the first year of employment contributed to a 48.9% increase in group fitness attendance and a 114.5% increase in training services revenue.
- During the second year of employment contributed to a 34.70% increase in group fitness attendance and 114.51% increase in training services revenue.

Fitness Instructor

Taught group fitness classes and provided personal training using multiple fitness modalities including Reformer, Pilates Mat, Chair, Cadillac, Ballet Barre, ZENGA, TRX, Spinning, High Intensity Interval Training, Rowing, Circuit Training, heated and non-heated yoga.

- Planned, developed, organized, and instructed specialty workshops and managed front desk services including sales, billing, membership, and class registration.
- Coordinated community and private events for promotional and educational purposes.
- Performed at events utilizing dance, hand-balancing, aerial arts, and gymnastics skills.
- Educated children about fitness through interactive demonstrations and performances designed to develop youth agility, coordination, balance, and imagination.

California State University, Long Beach, Long Beach CA

January 2011- December 2011

Statistics Lecturer

Taught in the psychology and sociology departments in the College of Liberal Arts.

- Prepared and delivered weekly lectures and conducted biweekly laboratory sessions.
- Started innovative teaching strategies, new curricula, and mentored and evaluated students.

California State University, Long Beach, Long Beach, CA

January 2010-December 2010

Graduate Assistant

Graduate assistant for Dr. Dwyer's Research Methods (PSY 200) class.

- Assisted during laboratory sessions, held review sessions prior to project submissions, held regular office hours, graded laboratory assignments, helped students with course material, created mock experimental designs, assisted with writing and statistics.

California State University, Long Beach, Long Beach, CA

January 2006-December 2011

Neuroscience Lab Manager, Research Assistant

Worked with the Primary Investigator and Professor and collaborated with primary investigators and student researchers at Bowdoin, Maine for laboratory and field-based research projects.

- Ensured that statistical and data management reports were generated in a timely manner.
- Collected and archived data from experiments, interpreted complex data, executed and supervised data analysis and presented findings to a multiple stakeholders.
- Developed, documented, and implemented procedures for research projects and experiments.
- Created financial and statistical reports, performed analysis and recommended spending activities.

Volunteer Experience

The Complete Student, Beaufort, SC

January 2022-Present

Treasurer, Board of Directors

Oversee financial planning, procurement, and investment funds for a local nonprofit education organization serving middle and high school students.

- Implemented a new annual expense budget and annual forecasting process.
- Reconciled monthly statements, invoices, and expense accounts, keeping records accurate and current.
- Prepared, interpreted, and presented financial reports, annual budgets, financial plans, and business plans.

Volunteer, Beaufort, SC

Data Science, Analytics Consultant

Perform analysis and deliver data science solutions for clients.

Client: **Sirius Natural Pet Foods**

March 2021-Present

- Design and deploy analytics for this pet food company's Shopify eCommerce store providing food for healthy animals.
- Design the website and Shopify storefront, and create an inventory optimization model by matching store inventory with actual needs to reduce requirements for storage space.
- Use a single, global forecast to predict each product as a weighted KPI with weekly updates and monthly forecasts for the store owner.

- Create a bin-packing algorithm to optimize box size selection that improves space efficiencies, decreases costs from wasted box space and lowers shipping costs.
- Increase total sales 617%, yield returning customer rate 100%, increased average order value 139%, increased total orders 200%

Client: **The Complete Student**, a nonprofit education institution. January 2021-Present

- Deliver predictive modeling and prescriptive analytics including optimization modeling and decision models to quantify new opportunities, identify upcoming challenges that ultimately increase revenue by 3% for the 2021-2022 school year.
- Use descriptive and diagnostic analytics including descriptive statistics, correlations, clusters, and trends to evaluate revenue, expenditures, to solidify the company's value proposition.
- Research industry standards, use descriptive analysis to identify KPIs for financial operations; faculty salary, experience, and workload; admissions, tuition; academics; student experience; and marketing.
- Apply scenario modeling, simulation with deviation analysis and create a strategic plan to increase student enrollment by 2% and the financial aid budget by \$40,000.
- Create a dashboard comprised of research and data from competitive schools to benchmark success against peers and improve executive decision making, policy development, and strategic planning.
- Collect data and build a data model for fundraising and marketing strategies which help to reach a goal of \$100,000 to build a new Art Center.

Client: **Breakwater Restaurant**, a popular dining destination. December 2018-May 2019

- Performed analysis of five years of data and used Python to integrate historical data finance and POS-generated sales data.
Conducted descriptive and diagnostic analyses, built predictive models and conducted prescriptive analyses that improved trend analysis for food and supply needs, staffing and menu planning.
- Created interactive visualizations based on key metrics, enabling executive chefs and owners to identify seasonal trends, identify customer types, target preferred meals and payment options, track inventory, reduce wasted food, predict and reduce waiting time, and analyze employee performance.

California State University, Long Beach, Long Beach, CA
Reproductive Biology Research Assistant

January 2008-December 2010

Worked with the Primary Investigator, Dr. Kelly Young, for laboratory and field-based research projects regarding seasonal changes in gonadotropin hormones in food-storing and non-storing birds.

- Performed computer-assisted microscopy (Mac and Windows based), stereology, histology (paraffin embedding, H&E staining), and immunohistochemistry (peroxidase-based).
- Performed tissue sectioning using microtome.

Veterans Hospital, Long Beach, Long Beach, CA
Reproductive Biology Research Assistant

January 2008-December 2010

Worked with the Primary Investigator, Dr. Andrius Baskys, to examine the effects of ramelteon on the quality of sleep using sleep evaluation instruments such as the Sleep Disorder Questionnaire and the Neuropsychiatric Inventory with Caregiver Distress in Parkinson's Patients.

- Examined effects of ramelteon on daytime sleepiness and memory using Epworth Sleepiness Scale (ESS) and Hopkins Verbal Learning Test (HVLT).
- Examined ramelteon effects on sleep/wake cycle and day/night activity patterns over a prolonged period of time (1 week) using a motion logger (continuous motor activity recording device) and computerized data analysis.

Veterans Hospital, Long Beach, Long Beach, CA
Psychometrician & Neuropsychological Testing Laboratory Technician

January 2006-December 2007

Performed neuropsychological testing for Neurologist, Dr. Richard Hanson. Additionally, worked with Primary Investigator, Michael Lopez, to create standardized scores for the Beck Depression Inventory-II in a chronic pain population.

- Maintained project records and reports. Collected and analyzed all data.
- Conducted and recorded results of a variety of neuropsychological (e.g., many Halstead-Reitan subtests), intelligence (e.g., WAIS-II, Shipley), vocational (e.g., CAI, COPS), personality (e.g., MMPI-II, MCMI), achievement (e.g., WRAT-III), and symptom report (e.g., BDI-II and Brown ADD) tests.
Represented the lab for Mental Health Awareness day.

- Trained and manage new volunteer laboratory technicians.
- Retrieved archival data from patient medical records to create norms for the Beck Depression Inventory II in a chronic pain population.

Publications

Gardner, R. D. (2010). A time course analysis of stem cell activity following brain injury in food-storing black-capped chickadees (*poecile atricapillus*). Thesis Presented to California State University, Long Beach. <https://books.google.com/books/about/A Time Course Analysis of Stem Cell Acti.html?id=RQ9QwAEACAAJ> .

Law, L. M., **Gardner, R. D.**, Allen, T. A., & Lee, D. W. (2010). Species-specific injury-induced cell proliferation in the hippocampus and subventricular zone of food-storing and nonstoring wild birds. *Developmental Neurobiology* 70(1), 16-27, doi: 10.1002/dneu.20748, <https://pubmed.ncbi.nlm.nih.gov/19885828/> .

Gardner, R. D., Allen, T. A., Mitterling, K. L., Law, L. M., Ramus, S., & Lee, D. W. (In Preparation). Cell proliferation in the septo-hippocampal pathway of food-storing and non-storing wild birds: Effects of species, season and injury.

Lopez, M.N., Pierce, R. S., **Gardner, R. D.**, & Hanson, R.W. (2012). Standardized Beck Depression Inventory-II Scores for Male Veterans Coping With Chronic Pain. *Psychological Services* 10(2), 257-263, doi: 10.1037/a0027920, <https://pubmed.ncbi.nlm.nih.gov/23003117/> .

Chiappe, D., & **Gardner, R. D.** (2012). The modularity debate in evolutionary psychology: A response to Barrett and Kurzban (2006). *Theory & Psychology*, 22(5), 669-682, doi.org/10.1177/0959354311398703, <https://journals.sagepub.com/doi/abs/10.1177/0959354311398703> .

Lectures & Talks

Shaw, B. & **Gardner, R. D.** (2016, 2017, 2018, 2019). Healthy Cooking. Lecture and Demonstration held 6 times a year in collaboration with Breakwater Restaurant for all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). Food Is More Than Fuel. Lecture presented bi-annually (April and November) for all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). You Can't Out Train a Bad Diet. Lecture presented bi-annually (April and November) for all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). Limiting Factors and Motivation. Lecture presented bi-annually (March and October) for all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). How to Shop at The Grocery Store. In collaboration with Publix, lecture presented bi-annually (January and August) for all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). How to Prepare Food to Meet Your Body Composition Goals. Lecture presented bi-annually (February and September) to all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). Nutrition for Weight loss. Lecture presented bi-annually (February and September) to all Body Makeover participants at LifeFit Wellness Services.

Gardner, R. D. (2016, 2017, 2018, 2019). Using MyFitnessPal to Meet Your Body Composition Goals. Lecture presented bi-annually (January and August) to all Body Makeover participants at Lifefit Wellness Services.

Gardner, R. D. (2016). Rehabilitative Exercise for Cerebral Palsy. Presented to Department of Physical Therapy on September 14, 2016 for LifeFit Wellness Services and Beaufort Memorial Hospital.

Gardner, R. D. (2016). Rehabilitative Exercise Following Joint Replacement. Presented to Department of Physical Therapy on June 18, 2016 for LifeFit Wellness Services and Beaufort Memorial Hospital.

Gardner, R. D. (2016). Setting Exercise and Activity Goals and Sticking with Them. Presented to Living Well After Cancer support group on January 4, 2016 for LifeFit Wellness Services and Beaufort Memorial Hospital.

Gardner, R. D. (2015). Rehabilitative Exercise Following Stroke. Lecture presented to Department of Physical Therapy on October 22, 2015 for LifeFit Wellness Services and Beaufort Memorial Hospital.

Gardner, R. D. (2015). Benefits of Physical Activity for Women. Lecture presented to American Association of University Women on April 25, 2015 for LifeFit Wellness Services and Beaufort Memorial Hospital.

Gardner, R. D. (2009). Cell Proliferation in the Septo-Hippocampal Pathway: Season, Lesion, and Species Effects. Colloquium presented at Bowdoin College on October 1st, 2009 for the Departments of Neuroscience and Psychology in Brunswick, ME.

Gardner, R. D. (2009). Adult neurogenesis in the hippocampus and septum of food-storing birds. Guest lecture presented at Bowdoin College on October 22nd, 2009 for a Seminar in Neuroscience for the Departments of Neuroscience and Psychology in Brunswick, ME.

Poster Presentations & Abstracts

Drumheller, K. M., Battistoni, B., Chapleau, J., Chinn, E., **Gardner, R.**, Latimore, A. D., Mana, A., McCulloch, K., Minakata, K., Tieu, R., Law, L. M., & Lee, D. W. (2007). Lesion-induced neurogenesis: A comparison between neurogenic and non-neurogenic brain regions. 3rd place award winner at California State University, Long Beach during Psi-Chi student research poster fair.

Gardner, R. D., Battistoni, B., Chapleau, J. D., Chinn, E., Drumheller, K. M., Latimore, A. D., Mana, A., McCulloch, K. M., Minakata, K., Tieu, R., Law, L. M., & Lee, D. W. (2007) Injury induced cytogenesis: A comparison between neurogenic and non-neurogenic brain regions. Society for Neuroscience Abstracts, <https://www.abstractsonline.com/pp8/#!/1820/presentation/17439>.

Gardner, R. D., Law, L. M., Drumheller, K. M., Allen, T. A., & Lee, D. W. (2009). Species-specific injury-induced cell proliferation in the hippocampus and subventricular zone of food-storing and non-storing wild birds. Poster presented at the All University Celebration of Research at California State University Long Beach.

Gardner, R. D., Law, M. L., Mitterling, K. L., Ramus, S. J., & Lee, D. W. (2008). Cell incorporation in the septo-hippocampal pathway of food-storing and non-storing birds: Season, lesion, and species effects. Poster presented at the Scatter Hoarding Conference at Cornell University, Ithaca, NY

Gardner, R. D., Law, L. M., Mitterling, K. L., Ramus, S. J., & Lee, D.W. (2008). Cell proliferation in the septo-hippocampal pathway: Season, lesion, and species effects. Society for Neuroscience Abstracts, <https://www.abstractsonline.com/Plan/ViewAbstract.aspx?sKey=11173d4b-3495-4ad0-a667-8af01dacc88b&cKey=60e7272e-5345-4773-81e7-c11fb75e427f&mKey=%7bAFEA068D-D012-4520-8E42-10E4D1AF7944%7d>.

Gardner, R. D., & Lee, D. W. (2008). Seasonal differences in cell proliferation in the hippocampus and septum of food-storing and non-storing birds. Presentation at the Student Research Competition at California State University, Long Beach.

Gardner, R. D., & Lee, D. W. (2008). Sex differences in cell proliferation following estrogen depletion in the adult zebra finch. Poster presented at California State University, Long Beach during the Psi-Chi student research poster fair.

Gardner, R. D., Mitterling, K. L., Law, L. M., Ramus, S. J., and Lee, D. W. (2008). Evidence for evolved adaptive specialization in the food-storing black-capped chickadee (*Poecile atricapillus*). Poster presented at the Southern California Animal Behavior Symposium, Long Beach, CA; California State University, Long Beach during the Psi-Chi student research poster fair; and the All University Celebration of Research, Long Beach, CA.

Latimore, A. D., Battistoni, B., Chapleau, J., Chinn, E., Drumheller, K. M., **Gardner, R. D.**, Mana, A., McCulloch, K., Minakata, K., Tieu, R., Law, L. M., & Lee, D. W. (2007). Injury-induced loss and recovery of function in male zebra finch: The effects of lesion on song, grooming, and aggression. Poster presented at California State University, Long Beach during the Psi-Chi student research poster fair.

Law, M. L., **Gardner, R. D.**, Drumheller, K. M., & Lee, D. W. (2008). Injury induced cell proliferation and incorporation: Comparing a food-storing and non-storing species. Poster presented at the Scatter Hoarding Conference at Cornell University, Ithaca, NY.

Mitterling, K. L., Law, L. M., **Gardner, R. D.**, Ramus, S. J., Lee, D. W. (2007). Hippocampus and septum volumes show season, sex, and species differences in Black-capped Chickadees and Dark-eyed Juncos. Society for Neuroscience Abstracts, <https://www.abstractsonline.com/pp8/#!/1820/presentation/7978>.

Pierce, R. S., **Gardner, R. D.**, & Lopez, M. N. (2006). Development of norms and psychometric analysis of the Beck Depression Inventory-II in reference to chronic pain patients: A proposed study. Poster presented at California State University, Long Beach during the Psi-Chi student research poster fair.

Marketing Content

Five Ways to More Willpower (12/30/2020): <https://www.bmhsc.org/blog/five-ways-to-more-willpower>

Exercise Offers to Help Cancer Patients (06/03/2020): <https://www.bmhsc.org/blog/exercise-offers-help-to-cancer-patients>

Healthy Cooking While You're Stuck at Home (04/17/2020): <https://www.bmhsc.org/blog/healthy-cooking-while-youre-stuck-at-home>

Weight-Loss Habits Working Against You (01/08/2020): <https://www.bmhsc.org/blog/weight-loss-habits-that-are-working-against-you>

Ready for a Body Makeover? (01/08/2020): <https://yourislandnews.com/ready-for-a-body-makeover-2/>

Dos and Donts of Cardio (12/30/2019): <https://www.bmhsc.org/blog/dos-and-donts-of-cardio>

New Fitness Goals for a New Year (12/18/2019): <https://www.bmhsc.org/blog/new-fitness-goals-for-a-new-year>

What Makes LifeFit Different From Other Gyms? (11/25/2019): <https://www.bmhsc.org/blog/evidence-based-medical-fitness-facility>

Making Life with Parkinson's Easier (07/17/2019): <https://www.bmhsc.org/blog/parkinsons-disease-support-delay-the-disease>

Mac Mitchell's Fitness Journey (01/14/2019): <https://www.bmhsc.org/blog/mac-mitchells-fitness-journey>

New Year, New You? Time for a Body Makeover (01/10/2019): <https://yourislandnews.com/new-year-new-you-time-for-a-body-makeover/>

8 Ways to Handle Social Pressure During the Holidays (12/10/2018): <https://www.bmhsc.org/blog/8-ways-to-handle-social-pressure-during-the-holidays>

Give the Gift Of Health (12/03/2018): <https://www.bmhsc.org/blog/give-the-gift-of-health>

Fix the Movements Causing You Pain (10/24/2018): <https://www.bmhsc.org/blog/funtional-movement-screen-to-find-and-correct-painful-patterns>

Navigating the Grocery Store (07/16/2018): <https://www.bmhsc.org/blog/navigating-the-grocery-store>

Tips and Tricks for Eating-Out (07/02/2018): <https://www.bmhsc.org/blog/tips-and-tricks-for-eating-out>

Bodies Are Made Over (06/20/2018): <https://www.bmhsc.org/blog/total-body-makeover>

Your Healthy Grocery Shopping Guide (01/21/2018): <https://www.bmhsc.org/blog/your-healthy-grocery-shopping-guide>

Body Makeover Program Enhances Fitness, Wellness, and Lives (08/09/2017): <https://www.bmhsc.org/blog/body-makeover-program-enhances-fitness-wellness-and-lives>

LifeFit Body Makeover at Beaufort Memorial (08/05/2016): <https://www.bmhsc.org/blog/lifefit-body-makeover-at-beaufort-memorial>

Awards

- You Make a Difference. Employee Recognition at Beaufort Memorial Hospital 2015.
- Graduate Research Fellowship. California State University Long Beach 2009-2010.
- Provost's Undergraduate Student Summer Stipend. California State University Long Beach 2007.

Honors

- Graduate Dean's List
- Undergraduate President's Honor List
- Golden Key Honor Society
- Phi Kappa Phi

- Psi Chi
- Summa Cum Lade
- Outstanding Senior in Psychology

Professional Organizations

- Functional Movement Screen (2017)
- Precision Nutrition (2015)
- National Strength & Conditioning Association (2014)
- National Physique Committee (2013)
- American Counsel of Exercise (2012)
- National Academy of Sports Medicine (2011)
- STOTT Pilates; Merrithew Health & Fitness (2011)
- Yoga Alliance (2011)
- Pilates Method Alliance (2011)
- American Psychological Society (2006)
- Society for Neuroscience (2006)
- Human Behavior and Evolution Society (2006)