Tim Weinzirl, Ph.D.

Email: tweinzirl@gmail.com Linkedin: http://www.linkedin.com/pub/tim-weinzirl/64/428/a1b Status: U.S. citizen

Skills

Programming languages Python (2006–Present), Scala (2023–Present), SQL (2017-Present), R (2015–2017), C (2003–2007)
Technical skills Snowflake, Databricks, data pipelines, machine/deep learning, Git, Docker, Linux, web scraping

Work Experience

Data Scientist / Senior Data Scientist
First Republic Bank San Francisco, California (June 2017 – Present)

- `Product operations:` Stood up SQL/Python data pipelines for preparing and delivering daily content (recommendations, reports) to salespersons and executives. Supported creation and measurement of bootstrapped metrics around deposit dollar growth that were used to inform production pipelines.
- `Quantitative analysis:` Made ad hoc data-driven recommendations to management. Produced targeted client lists for use in sales campaigns that led to millions of dollars in new deposits (e.g., the Spring 2023 CD reinstatement campaign raised $300M).
- `Machine learning`: Developed models (e.g., for grading loan applications, client segmentation, fuzzy matching), satisfied model governance requirements, and deployed them as self-service web applications.
- `Technical leadership:` Made unique contributions to infrastructure (e.g., custom Docker images) and developed homegrown libraries (e.g., database and file I/O, entity matching) used by the broader organization. Prepared and promoted resources (e.g., a Python programming course) on best practices in programming and data science. Routinely carried out the R&D to solve challenges (e.g., efficiently writing to off-prem databases) around the adoption of new packages or technology platforms. When someone had a Python question (e.g., "How do I install TensorFlow?"), they generally came to me first.

Research Fellow
University of Nottingham Nottingham, England (September 2014 – March 2017)

- Led research tasks (e.g., parameter estimation with Bayesian Markov Chain Monte Carlo techniques for $\sim 22,000$ spectra, hypothesis testing with Kolmogorov-Smirnov and chi-squared statistical tests, regression, and coding data pipelines) that facilitated nine (two first-author, one second-author) journal publications.

Data Science Advisor, Software Engineer
People Analyst (`http://peopleanalyst.com`) Austin, TX and Remote (January 2014 – September 2016)

- `Linkedin.com web scraping:` Wrote/deployed a Linkedin web crawler with Scrapy+Selenium WebDriver. Retrieved 1489 profiles for persons working in the HR departments of children's hospitals across the US.
- `Company roster simulation:` Developed an R Shiny web application (`https://peopleflow.shinyapps.io/Roster`) to simulate monthly staff rosters given organizational characteristics (e.g., size, attrition rate, gender gap).

Graduate Research Fellow/Postdoctoral Researcher
University of Texas at Austin Austin, TX (August 2006 – August 2014)

- Conducted scientific computing/analysis tasks (e.g., regression with parametric models, constructing mock galaxy images, interpreting real and simulated data) to publish nine (three first-author) papers, earn a Ph.D.
- As co-principle investigator of the international VENGA project, led five written proposals responsible for earning 101 nights ($\sim 60\%$ of VENGA's total allocated time) on the 2.7m telescope at McDonald Observatory.

Education

The Data Incubator San Francisco, CA (Spring, 2017)

- During this eight-week data science fellowship, I received training in essential data science technologies (SQL, Python, distributed computing) and built a recommender system for learning new technical skills.

University of Texas at Austin Austin, TX (2006–2013)

- Ph.D. in Astronomy, 2013; M.A. in Astronomy, 2008

Awards & Honors

- Ph.D. thesis was published (ISBN 978-3-319-06959-3) in 2014 as its own volume in Springer's book series for recognizing outstanding Ph.D. research (`http://www.springer.com/series/8790`).
- Outstanding Master's Thesis Award ($1000) in the College of Natural Science and College of Engineering at the University of Texas at Austin, 2009 (one awarded per year).