TIM WEINZIRL, PH.D.

Email: tweinzirl@gmail.com   Phone: 510-725-9054   Online materials: Personal projects, Github   Status: U.S. citizen

SKILLS

Programming: Python (2006–Present), SQL (2017-Present), Scala (2023), R (2015–2017), C (2003–2007)
Select tools: Dash, Databricks, Docker, Git, LangChain, Linux, OpenAI, OpenShift, Snowflake, TensorFlow

WORK EXPERIENCE

Data Scientist / Senior Data Scientist
First Republic Bank (*now part of JPMorgan Chase*)   San Francisco, California (June 2017 – Present)

- `AI`: Led the collaborative prototyping of a **LangChain agent** for automating research analyst tasks. Developed **machine learning models** (e.g., grading loan applications, client segmentation, fuzzy matching) according to model governance standards and deployed them as self-service web (e.g., Dash) apps.
- `Product operations`: **Lead data scientist/architect/engineer** on the "daily recommendations pipeline" providing actionable insights to the banking salesforce. Coordinated with executives, software engineers, and product managers regarding testing/launching new recommendation types. Tracked banker engagement metrics (e.g., click rate) and applied **statistical methods** to measure product efficacy (e.g., on deposit growth).
- `Quantitative analysis`: Conducted deep dives and produced data products to help executives understand e.g., client attrition, banker efficacy, and recurring transactions. Quickly and accurately turned around requests for sales intelligence (e.g., targeted client lists), often on short notice, to enable focused sales initiatives that raised millions of deposit dollars (e.g., the 2023 CD reinstatement campaign raised **$14M**).
- `Technical leadership`: Contributed uniquely to the infrastructure of the broader enterprise (e.g., tailored Docker images; custom Python packages for data analysis, database/file I/O, fuzzy matching). Prepared/presented learning materials (e.g., a **12-week** Python course) to spread technical excellence. Routinely carried out R&D to solve challenges (e.g., I/O with cloud databases, sending emails with Python) concerning new initiatives. **When someone had a Python question, they generally came to me first.**

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

- Produced **nine** (two first-author, one second-author) journal publications by leading research tasks such as parameter estimation with Bayesian Markov Chain Monte Carlo for remote sensing data ($\sim$**22,000** spectra), hypothesis testing & mathematical modeling, coding data pipelines, and mentoring student researchers.

Data Science Advisor, Software Engineer
People Analyst   Austin, TX and Remote (January 2014 – September 2016)

- `Linkedin.com web scraping`: Wrote/deployed a Linkedin web crawler with Scrapy+Selenium WebDriver. Retrieved **1,489 profiles** for persons working in the HR departments of children's hospitals across the US.

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 vs simulated data) to publish nine (**three first-author**) papers, earn 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**.
- Outstanding Master's Thesis Award (**$1,000**) in the College of Natural Science and College of Engineering at the University of Texas at Austin, 2009 (one awarded per year).