# 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–Present), 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`: Prototyped an LLM-agent for use by the sales team and analysts; pitched to executives and business lines. 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) applications.
- `Product operations`: Authored/maintained SQL+Python data pipelines for producing and delivering daily content (opportunities, reports) to salespersons and executives over web and email channels. Prepared bootstrap metrics (e.g., deposit growth) to demonstrate product efficacy to executives.
- `Quantitative analysis`: Made ad hoc data-driven recommendations to management, often on short notice. 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 **$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)
- Led research tasks (e.g., parameter estimation with Bayesian Markov Chain Monte Carlo techniques for **∼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                    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.
- `Company roster simulation`: Developed an R Shiny web application 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 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 (**∼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).