Thomas Bolf

Portfolio: https://thomasbolf.github.io | **Email:** thomasbolf1@gmail.com | **Phone: 817-307-0626**

Education

Texas A&M University B.S. in Computer Science and Applied Mathematics (Double Major)
GPA: 3.906 / 4.000 Statistics Minor
Expected Graduation: Spring 2025 Honors
Certification: AWS Certified Cloud Practitioner

Relevant Skills

Languages: Swift, Java, Javascript/Typescript, Go, C/C++, Python, R, Terraform, SQL, Lua, HTML/CSS
Technologies: AWS, Linux, Docker, Git, Flask, Next.js, React, Spark, Spring, Seaborn, D3.js

Work Experience

- ***Software Engineer Intern*** ***J.P. Morgan Chase & Co.*** *Summer 2023 & Summer 2024*
  - Leveraged Terraform, Java, and Python to provision and manage AWS infrastructure, incorporating technologies such as EC2, MSK (Kafka), EKS and ECS to design and implement a robust data pipeline
  - Utilitized Lua and Go to extract and process logs from an API Gateway, enhancing system monitoring and performance analysis
  - Developed interactive data visualization features for **developer.jpmorgan.com** using React, Highcharts, and JavaScript, improving data accessibility for API performance analytics.
  - Leveraged Java Spark and AWS (S3, EMR, EKS, Lambda) to migrate SQL procedures to cloud environments
- ***Research Assistant*** ***Texas A&M University*** *August 2022 - May 2023*
  - Conducted experiments to study human-robot interaction in emergency response settings
  - Collaborated with a multidisciplinary research team to translate various forms of complex data into visually engaging graphics for inclusion in a peer-reviewed research paper
- ***IT/Systems Intern*** ***The Community News*** *October 2019 - August 2021*
  - Designed a digital archive for newspapers printed in recent decades
  - Managed subscriber information database, advertiser accounts, and promotional materials

Projects

- ***LLM-Powered Data Visualization Tool***
  - Developed a Flask-based web application to generate AI-assisted data visualizations based on user-defined goals, target audiences, and visual styles.
  - Integrated OpenAI API to dynamically generate and execute Python code for data visualizations, enabling automatic chart rendering.
- ***City Metrics for Dogs***
  - Designed a program in Python to compile a dataset using various public API's to collect data from animal shelters as well as quality of life metrics for cities
  - Used various statistical analysis techniques to reach conclusions about the relationship of animal shelter data and quality of life data for cities
- ***Electrocardiogram Data Analysis (Aggie Research Project)***
  - Used Python to develop a full-scale ETL pipeline for a large time series generated by different medical technologies
  - Used R and Tidyverse to derive valuable insights and perform cross-recurrence quantification analysis with a time series of heart activity