

John Friess

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EDUCATION

The University of Texas at Austin

B.S. Computer Science (*Turing Scholars Honors Program*)

May 2025

GPA: 3.74

- **Relevant Coursework:** Data Structures and Algorithms, Computer Architecture, Operating Systems, Computer Vision, Competitive Programming, Discrete Math, Linear Algebra, Probability, Multivariable Calculus

EXPERIENCE

JPMorgan Chase & Co.

Software Engineer Intern

June 2023 - Present

Plano, TX

- Developed UI/UX of a mobile application responsible for a **600%+ increase in financial advisor usage** from the legacy application by benchmarking client wealth performance using Angular, TypeScript, HTML, CSS, and Figma
- Constructed a RESTful API proxy for **~5,000,000 client accounts** to centralize backend services for index fund data and performance returns for use in the user interface using Spring Boot, Java, and Apache Groovy
- Optimized and refactored legacy codebase saving **2+ seconds for data fetching** using stored caches to avoid redundant API calls for sending the client data to the user interface and efficient data structures for improved scalability and organization
- Leveraged unit tests and integration tests to achieve an **80%+ code coverage**, ensuring code written responds appropriately in provided environments using Jasmine & Karma, JUnit, and Mockito with a CI/CD pipeline in Jenkins

TuGo Events

Software Engineer

August 2022 - Present

Austin, TX

- Spearheaded the development of a mobile social media application used at **5+ colleges** with a **5-star rating** on the App Store using React Native, JavaScript, and Figma for the frontend and Django REST Framework, Python, and AWS EC2/S3 for the backend
- Created a web crawler and scraper to process **40+ event websites** hourly and integrated results with the backend database in Python
- Utilized Redux to eliminate **5+ seconds of data fetching** by caching the user state of the application and minimizing API calls
- Improved user experience with a **100%+ increase in page views** by integrating Apple Maps and Google Maps using JavaScript
- Devised advanced recommendation algorithms to assign priority scores to posts by weighting various factors using Python

American Systems

Software Engineer Intern

June 2022 - August 2022

Chantilly, VA

- Developed web application to find documents based on matching query contents with Django, jQuery, AJAX, HTML, and CSS
- Explored machine learning applications for text recognition with NumPy and Pandas libraries
- Performed data visualizations to analyze company spending habits and identify areas of discrepancy using SQL and Excel
- Updated employee profile database of **1,500+ employee profiles** and corrected mismatched entries

Fairfax County Public Schools (FCPS)

Information Technology Intern

April 2022 - May 2022

Alexandria, VA

- Utilized web debugging proxies, web scrapers, and SSL web server tests to ensure new software abides by FCPS standards for security and privacy before implementation to **200,000+ students and faculty**

PROJECTS

Desearch | Python, Rust, JavaScript, Solidity, HTML, CSS

- Led a team of 3 to create a decentralized search engine with an efficient web crawler, sophisticated indexing system based on user tailored recommendations, and a custom user interface using Django, Python, HTML, and CSS
- Developed smart contracts on the Solana and NEAR blockchains to store user search information in Python and Rust
- Received the award for Best Consideration of Security and/or Privacy at HackTX 2022

Tetris | Java

- Recreated the classic Tetris game in Java with randomized falling tetrominoes controlled by user keystrokes
- Designed TetrisBrain, a genetic algorithm-based AI to survive as many falling tetrominoes as possible, that is capable of scoring up to **100,000+** and consistently perform well given different board environments in Java
- Performed automated whitebox and blackbox testing with **90%+ code coverage** to verify implementation works correctly in JUnit

Interpreter and Compiler | C, x86 Assembly, Docker

- Developed an interpreter for a simple language with functions, loops, conditionals, and operations in C
- Constructed a compiler to generate equivalent AT&T x86 Assembly code in C
- Leveraged Docker to run code against **60+ created test cases** to evaluate accuracy in edge cases and stress cases

SKILLS

Languages: Java, Python, JavaScript, TypeScript, C, C++, HTML, CSS, SQL, Solidity, Rust, Verilog

Libraries/Frameworks: React.js, React Native, Angular.js, Spring Boot, Django, jQuery, JUnit, Jasmine & Karma, Flask

Developer Tools: Git, Maven, AWS, Xcode, Firebase, Jira, Figma, Postman