Ashley Feng

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Education

University of Texas at Austin Austin, TX
BS in Computer Science, Turing Scholars Honors Program & BS in Mathematics *May 2027*
GPA: 3.9/4.0
Coursework: (Honors) Operating Systems, Computer Architecture, Data Structures, Discrete Math | (Other) Linear Algebra, Probability

Technical Skills

Languages: Java, Python, C/C++, JavaScript, SQL/SQLite, x86-64, AArch64
Tools: React, Flask, Django, Catch2, JUnit, Web Assembly, Valgrind, Numpy, Matplotlib, Scikit-learn

Experience

Software Engineer Intern Jun 2025 – Aug 2025
Acuvate *Austin, TX*
- Developed scalable ML pipelines for time series and survival analysis, implementing custom feature transformers and parallelized cross-validation
- Designed and deployed RESTful APIs using FastAPI and Azure App Services, increasing throughput by 50% and supporting scalable client integration

Undergraduate Research Assistant Apr 2025 – present
UT Data Systems Lab *Austin, TX*
- Designed & optimized range-filtered ANN search algorithms with graph-based indexing and subgraph composition
- Benchmarked new search configurations that improved runtime memory consumption by 40% while sustaining near-baseline throughput and recall
- Evaluated performance on standard benchmarks using recall@10 and QPS under varying search queue lengths, and analyzed performance bottlenecks and cache behavior using KCachegrind

Projects

SkinSage | *Python, SQLite, Selenium, NumPy, MatPlotLib, Flask* June 2024
- Mapped 2000+ cosmetic listings webscraped from OliveYoung based on chemical similarities to develop content-based recommender system
- Modeled ingredient lists using word embedding and one-hot encoding to visualize products as 2D vectors using t-SNE dimensional reduction
- Built full-stack web application displaying all product information and computing real-time cosmetic recommendations with cosine similarity

Gameboy Emulator | *C++, OpenGL, SDL* Apr 2025
- Implemented fully functional emulator of the Gameboy Original, including CPU with ISA of 500+ instructions, liquid crystal display, pixel processing unit, and memory management unit
- Displayed cycle-accurate graphical output and supported joypad interrupts using OpenGL and SDL libraries
- Supported all memory bank controllers and manual bank switching to emulate all licensed Gameboy ROMs

Tsoogle | *Java, Attoparser* Nov 2024
- Indexed content of over 10,000 web pages using a web crawler extended from attoparser
- Designed full-stack web server displaying relevant page results by tokenizing and converting client-side queries supporting advanced search syntax to parse trees
- Verified reliability by implementing JUnit tests on randomly generated local web directories

Involvement

Awards: CyberPatriot Open Division Platinum Semifinalist for Cisco Networking, Groce Family Turing Scholarship in Computer Science
Organizations: Distributed Systems Reading Group, Turing Scholars Student Association, Women in Computer Science