Benjamin Porter

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Education

The University of Texas at Austin   Aug. 2017 – May 2021
B.S. in Computer Science   Cumulative GPA: 3.70
Coursework: Information Retrieval, Virtualization, Ethical Hacking, Network Security & Privacy, Algorithms,
Data Structures, Computer Networks, Operating Systems, Computer Architecture, Compilers, AI

Work Experience

Koddi – Software Development Intern   Remote | Jun. 2020 – Present
- Implemented IP address-based bot detection and filtering in a real-time data platform, automatically rolling back advertiser budgets to prevent overspending
- Updated backend logic for budget updates to improve database consistency and to support use cases for different types of ad campaigns
- Modified a test harness to use real client sample data, giving a more realistic measurement of performance

WP Engine – Software Engineering Intern   Austin, TX | Jun. – Aug. 2019
- Developed and wrote API integrations for a new microservice written in Go that works alongside an existing billing system, using a reconciliation pattern to increase invoicing throughput and error tolerance
- Participated in Scrum ceremonies and code reviews, and communicated updates to internal stakeholders

Parasol Laboratory – Research Intern   College Station, TX | Jun. – Aug. 2016
- Worked on a research project applying robot motion planning to the prediction of binding sites on proteins
- Implemented several metrics in C++ to evaluate candidate binding sites using physical characteristics

Projects

ComPy-la-Webs   Jul. 2019
- Implemented a lightweight virtual machine for Python in C++ that compiles to WebAssembly, allowing Python code to run in a browser
- Created a proof of concept supporting several Python instructions and a keyword for calling into JavaScript from Python code

Systems Projects   Sep. 2018 – May 2020
- Implemented a kernel heap, preemptive multithreading, virtual memory, a file system, and keyboard and mouse drivers in C++, building on existing functionality at each step
- Wrote a compiler for Pascal, performing lexical analysis and parsing with Lex and Yacc and producing executable x86 instructions

Web Crawler and Search Engine   Nov. – Dec. 2017
- Designed a web index in Java using inverted indexing to map words to pages where they appear and a query language supporting precedence order and logical operations
- Developed a comprehensive testing framework using JUnit, generating random collections of pages and links with graph algorithms and comparing results between my search engine and a search utility

Skills

Proficient: Java, Go, Python, C
Familiar: C++, Haskell, HTML, CSS, JavaScript
Tools: Git, Docker, Kubernetes, Aerospike (NoSQL)
Concepts: backend development, databases, CI/CD, SRE, testing, web security & privacy, virtualization

Extracurricular Activities

Competitive Programming: competed in biweekly programming contests individually and in teams
Information and Systems Security Society: attended biweekly capture-the-flag contests and security talks