

ISAAC DUGAN

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Education

Salisbury University

Sep 2021 – Dec 2024

Bachelor of Science in Computer Science - Software Engineering Track

GPA: 3.93

Database Systems, Software Engineering I/II, Object Oriented Programming, Web Design, Artificial Intelligence

Experience

CrunchAtlas

Sep 2024 – Present

Software Engineer

Manchester, NH

- Fine tuned open source large language model using proprietary datasets to improve model analysis
- Researched and implemented prompt engineering techniques and retrieval augmented generation architectures to improve model accuracy and reduce model hallucinations

Booz Allen Hamilton

Jun 2024 – Aug 2024

Software Engineer Intern

Annapolis Junction, MD

- Developed a machine-learning-driven audio processing and analysis platform for acoustic keylogging
- Implemented API endpoints for file processing, AI clustering, and advanced analytics along with a background job queue for long running training tasks
- Leveraged automated testing, CI/CD, and Docker to engineer performant and maintainable code

Open Professional Group

Jan 2023 – May 2024

Software Engineer Intern

Westminster, Maryland

- Led myself and another developer in refactoring a data validation engine which deduplicated logic and improved parsing of xls,xlsx, zip, pgp and gpg files reducing manual data review by 50%
- Pioneered use of automated testing on project by creating a detailed proposal, writing an initial test suite of 85 tests, educating fellow developers about automated testing practices, and updating team practices to require tests
- Designed and implemented a new subsystem of the application to automate of file transfers complete with error handling, reporting, logging, and configuration management inside the application's UI

GreenerVolts

Jun 2022 – Aug 2022

Software Engineer Intern

Frederick, Maryland

- Developed an LED upgrade estimation tool that takes project details and automatically generates project estimates, energy savings documents, and places orders for replacement lights in the warehouse management system
- Improved user experience by optimizing a search loading time by 30 seconds and enhancing search functionality in response to user feedback

Projects

GoKV | github.com/idugan100/GoKV

Jan 2024 - Present

- Created a concurrent, in-memory key value store that can handle 90,000+ reads/writes per second
- Implemented over 35 Redis compatible commands that can be used by the Redis-Cli or any other Redis-compatible client

Salisbury Analytics | www.salisburyanalytics.com

Jan 2022 - May 2024

- Developed an university analytics SaaS complete with grade distributions, GPA trends, professor reviews, enrollment trends, financial outcomes, course times, student demographics, and billing management
- Promoted website at Salisbury University and have 50 registered users and over 500,000 page visits to date

Hackathons

- Won first place overall at Bitcamp - the largest hackathon on the East coast with a terminal/cloud journaling system
- Won third place overall at HackUMBC with AI facial recognition security software
- Won first place for the cybersecurity track at HenHacks with a dependency vulnerability scanner for Haskell codebases
- Participated in Hoyahacks and built a Retrieval-Augmented Generation chatbot trained on scraped data

Technical Skills

Go, PHP, Laravel, Python, FastAPI, SQL, Redis, Angular, React, Tailwind, HTMX, Automated Testing, Git, AWS, Docker