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 to improve performance on complex analysis tasks and to improve domain vocabulary and specialization
- Engineered data pipelines to collect relevant domain related information and transform it into training datasets

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 containerization 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

- HackUMBC 2024: won best educational software with an AI powered exam generator
- Bitcamp 2024: won first place overall with a terminal/cloud journaling system
- HenHacks 2024: won best cybersecurity software with a dependency vulnerability scanner for Haskell codebases
- Hoyahacks 2024: built a retrieval-augmented generation chatbot trained on scraped data
- HackUMBC 2023: won third place overall with an AI facial recognition security software

Technical Skills

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