Mikheil Uglava

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EDUCATION

PENNSYLVANIA STATE UNIVERSITY **2024**
Bachelor of Science, Computer Science *Abington, PA*

PROJECTS

BEACON - IoT Smart Home Management System, Golang, MongoDB, React | Link

- Developed a modular IoT smart home platform using Raspberry Pi and Zigbee, supporting integration with 15+ smart devices including lights, sensors, and thermostats.
- Optimized communication protocols (MQTT/Zigbee) to reduce latency by 40%, enabling real-time control and monitoring.
- Achieved 20% improvement in overall energy efficiency through system-wide automation and smart scheduling features.

Penny – Personal Expense Tracker, FastAPI, React, TypeScript, SQLAlchemy | Link

- Engineered a full-stack personal finance application using FastAPI, React, and TypeScript, enabling transaction tracking, category-based budgeting, and monthly spending analysis.
- Designed and implemented RESTful APIs with SQLAlchemy ORM, incorporating request validation, persistent data storage, and integer-based monetary calculations to prevent floating-point precision errors.
- Developed a responsive React dashboard featuring interactive spending charts, real-time budget alerts, transaction filtering, and CSV exports.

WORK EXPERIENCE

Upwork **Mar 2022 - Aug 2026**
Software Developer *Remote*

- Developed high-performance web applications using Python (Django/FastAPI), optimizing database query efficiency to improve API response times by 40%.
- Engineered a secure authentication system utilizing Two-Factor Authentication (2FA) and email verification, reducing fraudulent sign-ups and bot activity.
- Designed and deployed scalable RESTful APIs on AWS EC2, utilizing CI/CD pipelines to cut deployment turnaround time and ensure high availability.
- Architected complex data models in PostgreSQL, utilizing custom indexing strategies to handle large datasets with minimal latency.

Global Cargo **Dec 2020 - Jan 2022**
Software Developer *Morrisville, PA*

- Revamped the frontend architecture using React.js, implementing lazy loading and code splitting to decrease initial page load times by 35%, directly improving user retention.
- Decoupled a monolithic application into Java/Spring Boot microservices, enabling parallel development work-flows that increased team delivery speed and scalability.
- Built an event-driven serverless pipeline using AWS Lambda and S3 to automatically process user-uploaded images and video files, reducing reliance on dedicated servers and cutting infrastructure costs.
- Established a robust testing culture by implementing automated suites in Jest and Selenium, reducing production bug reports prior to release.

SKILLS

- **Languages**: Python, Java, JavaScript, SQL, Golang
- **Frameworks**: Spring Boot, Django, FastAPI, React.js, Express.js, Flask
- **Databases**: PostgreSQL, MySQL, MongoDB, Oracle
- **Cloud & DevOps**: AWS (EC2, S3, Lambda, ECS), Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins)
- **Testing & Tools**: Git, Jira, Postman, Selenium, Jest, Pytest, Junit