James Gasek

Boston, MA

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Education

Lehigh University

Aug. 2020 - Dec. 2023

B.S., Computer Science and Business, Data Science (Completed Early)

Bethlehem, PA

Advanced Math and Science Academy Charter School

Marlborough, MA

Experience

Amazon Robotics

Dec. 2024 - Present

Software Engineer, Robotic Sortation Technology - ML / Optimization

North Reading, MA

- Led the implementation of a real-time predictive optimization framework to reduce internal inneficiencies during the package sortation process. Delivered within first six months on the team, with millions in projected annual savings
- Implemented a new data fetching strategy for fulfillment metrics dashboards reducing feature development time by 60%
- Developed microservices to plan robotic movements using Go, Kotlin, and Scala on serverless AWS infrastructure, with meticulous standards for monitoring, testing, and uptime across Amazon's global network of fulfillment centers
- Conceptualized, planned, and delivered a Slack-based AI agent to monitor and take action on metrics on AWS Bedrock

Amazon Robotics Summer 2023

Software Engineer Intern, QA Automation

North Reading, MA

- Developed serverless React application for viewing software regressions on the QA Automation team, using AWS CDK "Infrastructure as Code" framework for infrastructure and CI/CD
- Completed project weeks ahead of schedule and tailored the product more closely to suit end-user needs

Structural Services Dec. 2021 - May 2023

Software Engineer

Bethlehem, PA

- Lead developer of device interaction software for an AI-powered assistive system for the construction industry
- 10x-ed wireless image transmission data throughput by utilizing SIMD for real-time data compression and transmission
- Developed C++ interfaces for CV cameras, SBG Systems IMU/GPS, and Micro-Epsilon LiDAR, enabling centimeter-accurate GPS tracking using RTK positioning

Projects

Loupt | Next.js, TypeScript, PostgreSQL | loupt.co

2023 - 2025

- Technical Co-Founder of a regulation crowdfunding platform aimed to democratize access to investment opportunities
- Designed and deployed Node.js services and Next.js web application with PostgreSQL on ECS with AWS services
- Integrated third-party APIs for investor KYC/AML, payment processing, and marketing automation
- Led development team and worked closely with institutional investors and stakeholders

Newton Notes | SwiftUI | gasek.net/newtonnotes

2024

- Developed a minimalist, privacy-focused gym workout tracking application using pure SwiftUI
- Implemented a clean, intuitive interface prioritizing simplicity and user privacy
- Created as a free, open-source alternative to complex fitness tracking applications

CV Hazard Detection Model | Python, OpenCV, Keras, AWS SageMaker | Lehigh Capstone - Fall 2023

2023

- Fine-tuned object detection model to improve performance of off-the-shelf models by 100x for autonomous cyclist assistance device with Bethlehem-based startup, Skillion
- Used publicly available datasets including KITTI, Norwegian University of Science and Technology, and manually collected data labeled with in-house Python labeling program from Tesla Model S onboard camera

Technical Skills - Most Experience First

Languages: C++, TypeScript/JavaScript, C, Kotlin, Java, Python, Go, Shell, Swift/SwiftUI, Rust, Scala, Ruby Frameworks/Technologies: AWS CDK, Next.js, OpenSearch, React, PostgreSQL, Bedrock, Node.js, Docker, GCP Developer Tools: AWS, pgAdmin, Railway, Figma, Vi(m), Linux, CMake, Firebase, Xcode, Github Actions, LLMs