

# JAMES GASEK

Boston, MA

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## Education

### Lehigh University

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

*Advanced Math and Science Academy Charter School*

**Aug. 2020 – Dec. 2023**

*Bethlehem, PA*

*Marlborough, MA*

## Experience

### Amazon Robotics

**Dec. 2024 – Present**

*Software Engineer, Robotic Sortation Technology - ML / Optimization*

*North Reading, MA*

- Led the design and implementation of a LLM-powered AI agent integrated with several internal dashboards and RAG to help workers run their floors more efficiently using open source tools, such as the Strands Agents framework and Langfuse observability. **The project was nominated as the most impactful across Amazon Robotics this year**
- Developed a real-time ML model feature aggregation service to predict and reduce package recirculation during the sortation process using Opensearch. Delivered within six months on the team, tens of millions in annual savings
- Implemented a new data fetching strategy for fulfillment metrics dashboards reducing feature development time by 60%
- Developed microservices to coordinate robotic movements using Go, Kotlin, and Scala on AWS infrastructure, with meticulous standards for monitoring, testing, and uptime across Amazon's global network of fulfillment centers

### 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](https://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](https://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