

Benjamin Kataoka

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EDUCATION

Northeastern University

August 2022 – August 2026

B.S. in Computer Science, 3.9/4.0 GPA

Boston, MA

Relevant Coursework: Artificial Intelligence, Machine Learning and Data Mining, Natural Language Processing, Object-Oriented Design, Algorithms and Data, Computer Systems

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, Kotlin, SQL, HTML/CSS, C, C++

Frameworks: React, Redux Toolkit, Vite, Node.js, Express, FastAPI, Spring Boot, Next.js, Tailwind CSS, Pydantic

Technologies: PostgreSQL, SQLAlchemy, Docker, Kubernetes, Helm, AWS, Terraform, Git, Vitest, Playwright, pytest

AI/ML: Gemini API, LangChain, OpenAI API, TensorFlow, PyTorch, scikit-learn, Pandas, NumPy

EXPERIENCE

Software Engineering Co-op

August 2026 – Present

Travelers

Morristown, NJ

- Build full-stack features for an AI-assisted auto claims intake app used by call-center agents, threading upstream eligibility flags through **SSE** consumers, **Zod** type guards, **Redux Toolkit**, and card resolvers.
- Tightened intake validation across **4 claim cards** with shared postal and phone rules backed by **~350 lines of tests**, and ran a **40-file** cross-workspace refactor consolidating duplicated constants.
- Configured **Kubernetes** nodeSelectors and tolerations on **AWS EKS** via **Helm** to isolate app pods on a chaos nodegroup, enabling **Gremlin** fault-injection testing.

Software Engineering Co-op

July 2025 – June 2026

Marsh McLennan

New York, NY

- Maintained **Python** backend microservices (**Pydantic**, **aiohttp**) deployed on **AWS ECS**, adding stricter request validation and error handling.
- Added automated security checks to **GitHub** CI/CD pipelines, catching vulnerable dependencies and code before they reached production.
- Migrated the team's package management from **Poetry** to **uv**, cutting dependency resolution and build times from **minutes to seconds**.

IT/Software Engineering Co-op

January 2025 – June 2025

Longfellow Investment Management

Boston, MA

- Built **Python** and **Power Query** pipelines that pull, clean, and surface investment analytics for portfolio managers.
- Automated maturity alerts with **Python** and **Power Query**, replacing a manual reporting workflow.

Teaching Assistant – CS3000 Algorithms and Data

September 2024 – December 2024

Northeastern University

Boston, MA

- Held office hours and reviewed code for a **400-student** course on graphs, dynamic programming, and complexity.

PROJECTS

Fantas.ai | React, FastAPI, Postgres, Gemini, Clerk

- Built and deployed solo a fantasy football hub (**React 19**, async **FastAPI**, **Neon Postgres**) that merges every team a user owns on Sleeper and ESPN into one dashboard with live scoring and win probability.
- Wrote a start/sit optimizer that solves the best legal lineup for each league's slot rules (**FLEX**, Superflex, **DEF**), then re-solves with each free agent added to rank waivers over 4 weeks.
- Cut typical API latency **31%** (365 to 251 ms) after profiling showed the auth layer calling **Clerk's** API on every request (46 calls for 39 requests); limited calls to first-time users.
- Audited all **18 routes** that take an ID and fixed an IDOR-class bug in **5**, where a request parameter could rebind a user's linked account and expose a stranger's roster.

Reinforcement Learning Self-Driving Car | Python, PyTorch, TensorFlow, Gymnasium

- Trained **PPO** and **DQN** agents on a custom **Gymnasium** environment with shaped rewards (lane centering, collisions, speed), reducing off-track terminations.