Matt (Jiwoong) Park

mtp0326@seas.upenn.edu | GitHub | LinkedIn | (860) 205-6990

29-18 41st Ave Apt 10C, Long Island City, NY 11101

EDUCATION

University of Pennsylvania, *School of Engineering and Applied Science*   **Sept. 2021 - Dec. 2025**
- **M.S.E. in Robotics | B.S.E. in Computer Science with AI Concentration**; Minor in Data Science, Mathematics
- Relevant Courses | OS, Software Systems, Cloud Computing, AI/ML(RNN, CNN, NLP), Big Data, DSA
- Head TA | ESE 1110: Atoms, Bits, Circuits, and Systems; Engineering & Wharton M&T Summer Institute 2022

PROFESSIONAL EXPERIENCE

Amazon Robotics, *Software Development Engineer Intern*, Boston, MA   **May. 2024 - Aug. 2024**
- Deployed a real-time analytical platform for **Tier 1** storage service that powers **98%** of all fulfillment centers.
- Integrated native AWS architecture to reduce latency of end-to-end data transmission by **10X**, which enabled the platform to present live metrics faster for Amazon Tech-Service, Warehouse, and SDE employees.
- Initiated and drove cross-functional discussions with stakeholders (Tech PM/Service teams) to define and specify critical features/metrics for the platform.

Flow AI, *Lead Software Developer Intern*, Austin, TX   **June. 2023 - Sept. 2023**
- Part of developing a SaaS AI platform that maximizes daily productivity (400+ calls) for sales representatives.
- **Led team of 8** interns through product discussion with the CEO, API integration, code reviews, and DB design.
- Developed a web scraping algorithm using Beautifulsoup to train the platform's AI model used to validate sales accounts, which improved the model's F1 score by **~54.7%**.

PROJECT EXPERIENCE

Hack4Impact UPenn, *Project Manager (DevOps) & Full-Stack Developer*   **Sept. 2023 - Present**
- **Hack4Impact Boilerplate**: Open-source starter web app template that uses the MERN stack.
  - Led club-internal DevOps team by transforming the boilerplate to automate testing using GitHub Actions, deployment through Terraform and AWS ECS, and debugging in projects with DataDog and Mixpanel.
  - Sped up multi-request functions to **10X** by developing concurrent processing services for the boilerplate.

CS Team Projects, *Systems Software, Full-Stack*
- **PennCloud (**In progress), *Systems Software Developer (C++)*   **Oct. 2024 - Present**
  - Desc: Cloud platform that offers webmail and storage drive through distributed front/backend servers.
  - Building Bigtable storage for **10MB+** files that are distributed and replicated in multiple backend servers.
  - Creating a local SMTP server that receives and sends emails to remote users. (e.g. Gmail, Outlook)
- **SafeStreetNYC**, *Full-Stack Developer (React, Node.js, MySQL, AWS)*   **Mar. 2023 - May. 2023**
  - Desc: Site that ranks NYC Housing/Airbnb based on location input and preference of safety, healthcare, price.
  - Improved DB (**5M+** entities) query performance time by **~95.5%** with BCNF-normalized schema.
  - Made interactive UI that visualizes crime and hospital types based on location and distance inputs on the map.
- **ThirdEye**, *Co-Founder (Python, C++)*   **Nov. 2021 - June. 2022**
  - Desc: Haptic/Audio Guide Belt that assists visually impaired patients – developed with Penn Ophthalmology.
  - Made tool to provide wider assisted perception coverage and ultimately become an alternative to white canes.
  - Created the prototype using RealSense camera for depth perception, TTS audio for voice navigation, and haptic motors for an intuitive direction guide, all wired and controlled by RPi and Arduino.

TECHNICAL SKILLS

Language: Python, Java, JavaScript/TypeScript, C++, SQL, Kotlin
Tools: AWS, React, HTML/CSS, Node.js, Django, MySQL, MongoDB, PyTorch, Spark, Terraform, Git, Docker