Timothy Mou

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Work Experience

AMAZON | Software Development Engineer
March 2024 - Present | Bellevue, WA

- **Labor Plan Auditing System:** Designed and created new auditing platform enabling Fulfillment Center planners to track and query labor planning metrics (volume forecasts, attendance, attrition)
  - Built event-driven notification system to capture manual and auto-published imports, storing metadata in DocumentDB with optimized indexing strategy for high-volume queries
  - Developed RESTful query API supporting complex filtering capabilities across 100+ Fulfillment Centers
- **Amazon Day Delivery Program:** Led expansion of Amazon Day delivery program to Australia and Mexico, enabling date-precision deliveries and improving customer order consolidation
  - Achieved 25% reduction in development effort through process optimization. Coordinated cross-functional requirements gathering with country PMs, added cross-region infrastructure and support for international marketplaces

AMAZON | SDE Intern
June 2022 – August 2022 | Seattle, WA

- Designed and implemented a maintainable and efficient method to query large snapshot objects, saving four months of engineering effort per model change
- AWS services used: S3, Glue, Athena

CARNEGIE MELLON UNIVERSITY | Research Assistant
May 2020 - August 2021 | Pittsburgh, PA

- Led and designed a corpus study of state machine protocols in smart contracts
- Built static analysis tools to identify gas optimizations and access control vulnerabilities in Solidity programs

Education

SWARTHMORE COLLEGE
BA, Computer Science and Mathematics
2019 - 2023 | Swarthmore, PA
GPA: 3.99 / 4.0

Skills

LANGUAGES

C++ • Java • Python • C • OCaml

TECHNOLOGIES

AWS (S3, Lambda, Athena, DocumentDB) • REST APIs • Git • SQL

Awards

2024	Bronze Medalize (12th place)	International Collegiate Programming Contest (ICPC) World Finals
2022	Silver Medalist (2nd place)	ICPC North American Championship
2021	Bronze Medalist (4th place)	ICPC World Finals Invitational