Emmanuel Lee

Software Engineer

Employment History

Software Engineer at Uber, Toronto

May 2019 — Present

Marketplace Monitoring and Diagnostics - internal tools that enable rapid, actionable response to degradations in marketplace metrics worldwide

- Led an integration with Marketplace Experimentation team to provide experiment creators with city-based monitoring and alerting in case of either negative side effects or market degradations affecting results.
- Applied clean, robust design principles and managed stakeholder requirements to create a new server-side API for our alerting tool.

Software Engineer at Uber, Seattle

June 2017 — May 2019

Scheduled Rides - platform and in-app feature for booking rides in advance

- Led the project management, implementation, experimentation and impact analysis of major features aimed at reassuring riders of their upcoming scheduled rides, coupled with a migration to Uber's latest matching engine. Resulted in +$2MM in annualized net profit.
- Led the collaboration to fulfill all Uber Health trips through the scheduled rides platform. Uber Health launched in March 2018.
- Collaboratively scoped the fulfillment of first- and last-miles of all Uber Copter bookings with scheduled rides. Launched publicly in July 2019.

Uber Movement - sharing and visualizing anonymized data to help improve urban planning around the world

- Full-stack feature work and observability engineering to prepare for launch. Uber Movement launched publicly in August 2017.

Software Engineering Intern at Uber, San Francisco

August 2016 — December 2016

Uber Eats: Search and Home Feed - leveraging data and analytics to help every customer effortlessly decide what to order

- Kick-started the localization of search results as Uber Eats began expanding internationally. Prototyped a Spanish auto-completion engine using Elasticsearch, data pipelines and Python scripts.
- Applied ML-ranking to Top Categories list, boosting usage rates +30%.
- Deployed an intelligent manager of the exploration vs. exploitation trade-off among type-along suggested results.

Software Engineering Intern at Microsoft, Redmond

January 2016 — April 2016

Azure AD Gateway - reverse-proxy to all AD cloud identity services

- Shipped a complete monitoring solution with comprehensive metrics, test runners, dashboards, alerts and logs for a critical new distributed web service—ensuring high availability and reliability.

Details

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Skills

- Service-oriented architecture
- API design
- Experimentation
- Monitoring and observability
- Cross-team/org collaboration
- Agile project management
- Product design
- Go
- Java
- C++
- Python
- JavaScript
- C#/.NET
- HTML/CSS
- SQL
- Git
- Machine learning and AI

Links

Personal website
LinkedIn profile

Program Manager Intern at Microsoft, Redmond

May 2015 — August 2015

Windows Updates and Security - sourcing, triaging and scheduling the necessary updates and security patches for all versions of Windows

- Spearheaded the investigation of regressions caused by kernel conflicts between Windows Updates and third-party antivirus and virtualization software, which impacted millions of users.

Software Engineering Intern at Connected, Toronto

August 2014 — December 2014

- Launched Connected's first client project (SNYPR): a sports-training app backed by Eric Schmidt's venture fund. Full-stack iOS: from simple CRUD, to interactive workouts, to infinite-paging leaderboards.

Software Researcher Intern at Epson, Markham

January 2014 — May 2014

Epson Canada's EDGE research group

- Built testing and validation tools for a team using 3D computer vision robotics and learning algorithms to classify deformable objects.

Android Developer Intern at InfoMax, Markham

May 2013 — August 2013

- Developed an Android app from scratch, providing customers a mobile manager of the proprietary digital form information-capture solution.

Education

Software Engineering, University of Waterloo

2012 — 2017

Extra-curricular activities

Software Researcher at University of Waterloo

2016 — 2017

SAT-solver on GPUs

- Collaborated with a PhD student and professor attempting to accelerate SAT-solving using massive parallelization on GPUs.
- Our capstone team was awarded the: GM Canada Innovation Award, that "recognizes student teams who excelled in their 4th year design projects through collaborative learning, innovative concept development and commercial application."

Software Developer at University of Waterloo

January 2017 — April 2017

Amazon Alexa Fellowship

- Our team was chosen to pilot an academic partnership program with Amazon to develop new applications that combine AI with Alexa.
- We built a home lighting solution able to understand natural phrases such as "It is too bright in the living room!" using fuzzy logic to infer the exact current and voltage values for the light bulbs.