

Michael Lin

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EXPERIENCE

Software Engineer - Part-time Contractor

IBM

September 2018 - Present, Remote

- Continued my previous work.

Software Engineer Intern

IBM

May 2017 - August 2018, Toronto, ON

- Developed and scaled microservices for Cognitive Class Virtual Labs Environment with NodeJS, Rails, and Flask, supporting over 1M learners worldwide to practice hands-on Data Science experience.
- Designed management console akin to the App Store Connect but for education with user experience in mind, built with front-end technologies such as ReactJS.
- Designed and maintained monitoring infrastructure with Prometheus, and Grafana to monitor server utilization and database performance, provided actionable metrics to scale-up and scale-down servers as needed during traffic surge.
- Organized and implemented users data tracking to maximize and measure the effectiveness of email promotion campaigns with Segment, Amplitude, and SendGrid.
- Developed data pipeline and KPI reporting API endpoints to automate the data collection and reporting process for executive reports, widely used across the organization and improved workflow.
- Performed DevOps practises, including infrastructure as code, automated testing, continuous integration, and continuous deployment of different services with Travis CI, Ansible, Terraform, Docker, and Rancher.

Software Engineer Intern

YY Inc.

July 2016 - August 2016, Guangzhou, China

- Refactored the codebase with the latest MongoDB C++11 driver from the old C-based driver, improved code readability and maintainability.
- Implemented unit tests with GoogleTest to ensure the correctness of business logic in the refactored codebase.
- Developed automated scripts with Blade Build System to improve the building and releasing process of the C++ codebase.

PROJECTS

Bro-ssessment - Measuring Camaraderie in Online Forum

- Developed a system to assess camaraderie through the analysis of peer-to-peer interaction in the online discussion forum. Using data from the Pepper Project, a learning management system research project from the University of Toronto.
- Researched on various topics in NLP, such as sentiment analysis, lexical entrainment, and latent semantic analysis, and applied them to measure connectedness between students.
- Analyzed multiple measurements and compared results against the classroom community scale, a measurement for the sense of community, of the discussion forum from the Pepper Project.

Collaborative List - A Project Management Tool

- Led a team of 5 people to develop a project management tool for scholars and faculty members to keep track of the research material (books, articles, journals, videos, etc) for meetings and seminars.
- Designed system architecture and implemented backend service with Flask, MongoDB, and Elasticsearch. Designed UI and built the front-end web application with ReactJS.
- Built and maintained CI/CD pipelines to deploy containerized service with Docker on Cloud server.

EDUCATION

Computer Science, BSc Specialization

University of Alberta · Edmonton, AB · Expected Graduation May 2020

SKILLS

Languages: JavaScript, Python, Ruby, HTML/CSS

Frameworks & Tools: NodeJS, Flask, Django, Rails, ReactJS, PostgreSQL, MongoDB, Docker, Terraform, Ansible, Grafana, AWS Lambda, API Gateway, S3

Industry Knowledge: Web Development, Agile