

# MICHAEL KHA

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Software engineer adept at abstract and low-level concepts from an architect's approach. Capable of researching and applying unfamiliar technologies by comparing use cases, alternatives, and trade-offs. Proficient with scaling and automated deployment of systems. Pursuing positions relevant to full-stack, cloud, and data infrastructure.

## EDUCATION

**B.Sc. in Software Engineering** | *Cooperative Education* Rochester Institute of Technology  
**Minors:** Mathematics, Computer Science | GPA: 3.7 08/2017 – 05/2021  
Courses: Analysis of Algorithms, System Requirements and Architecture, Cloud Computing, Data Management, Data Mining, Computer Vision, Statistics, Linear Algebra, Graph Theory, Combinatorics

## SKILLS

**Languages:** Python, Java, C/C++, JavaScript      **Cloud Providers:** AWS, GCP, Azure  
**Technologies:** Git, React (Hooks/Redux), OpenCV      **DevOps:** Vagrant, CloudFormation, Terraform, Ansible,  
**Data:** SQL, NoSQL, Kafka, Spark, Cassandra, Hadoop      Docker, Kubernetes, CI/CD, Server Architecture

## EXPERIENCE

**AI Software Engineer Intern** | *IOMAXIS - Remote* 05/2020 – 08/2020  
• Introduced MLOps to automate workflows and shift research business model to development on AI R&D team  
• Researched automated AI workflow platforms (such as Airflow) used by tech companies in production systems  
• Proposed distributed ETL pipeline to centralize data, while automating data extraction and pre-processing  
• Led automated deployment of service using Vagrant, agnostic to AWS or on-premise environment for migrations  
• Leveraged Docker and Kubernetes for configuration, resource management, and scaling of Kafka  
• Kafka, Spark, Cassandra, AWS, Vagrant, Terraform, Docker, Kubernetes, Jira, Scrum

**Cloud Software Developer Intern** | *IOMAXIS - Arlington, VA* 01/2020 – 05/2020  
• Refined hybrid cloud security concept to a functional product, automating builds using major cloud services  
• Created Flask API endpoints with OAuth2.0 bearer authentication to secure user access to build details  
• Validated and optimized cloud service requests by leveraging multiprocessing to improved reliability of builds  
• Verified builds successfully deployed with Bamboo CI to monitor logs and test network connectivity  
• Python, Flask, JavaScript, React, SQLite, AWS, GCP, Azure, Docker, Ansible, Bamboo, Jira, Scrum

**Software Engineer Intern** | *Norfolk Southern - Atlanta, GA* 05/2019 – 08/2019  
• Implemented changes to database API, recording status of 180,000 monthly cars at terminals and on the line  
• Identified the value of disaster recovery for mission-critical systems and domain knowledge in business  
• Java, Python, C, Perl, Db2 SQL, Jenkins

**Teaching Assistant** | *Rochester Institute of Technology - Rochester, NY* 08/2019 – Present  
• Supporting cloud course with topics in architecture, containerization, automated deployment, and big data  
• Previously assisted system design course that introduces design patterns, APIs, metric analysis, and refactoring

## PROJECTS

**Senior Capstone Project** | 🌐 *addletic.com* – League Management and Social Platform 08/2020 – Present  
• Development of sports league management full-stack application with the customer as the product owner  
• Rearchitecting system by analyzing incomplete features, reducing code debt, and applying best practices  
• Overhauling client-side state management and AWS server deployment to deliver functional product  
• Python, Django, TypeScript, React, Redux, Sass, Postgres, AWS, CloudFormation, Docker, Jira, Scrum

**Cloud Microservice Simulation** | 🌐 *burger-order-microservice* 09/2019 – 12/2019  
• Proof of concept demonstrating microservice orchestration using SQS by tracking a defined process or pipeline  
• Auto-scaling of services triggered based on SQS request traffic using custom CloudWatch metrics  
• Ruby on Rails, React-Rails, AWS, DynamoDB, Docker