

Chicago, Illinois  
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# Alex Shank

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Software Engineer with three years' experience developing effective, maintainable web services across multiple industries and multiple tech stacks. Skilled in advanced concepts such as networking, algorithms, data structures, machine learning, and artificial intelligence through master's degree coursework and projects.

## Technologies and Languages

- Languages: Java, Python, JavaScript, Kotlin, Scala, Haskell
- Technologies: AWS, Azure, Kafka, Java Spring, Docker, Postgres, MongoDB, Git, React
- Other: AWS CDK, GitHub Actions, CI/CD, Twilio, JUnit, Jest, PyTorch, Kubernetes

## Work Experience

Software Engineer CapTech Consulting

**Feb 2021 – Present**

## Global Restaurant Management Firm

Remote, Chicago

- Automated menu pricing for 100+ restaurants at 20+ airports under various Port Authority jurisdictions.
- Served as tech lead for team of five developers working within the Microsoft Power Apps platform.
- Identified competitors using Google Places API and built Cloud Flows for extracting menu item prices.
- Designed and implemented JavaScript algorithm for finding optimal menu item prices based on competitors.
- Consulted with UX leaders to design website built with JavaScript, jQuery, and Bootstrap.

## Global Logistics Firm

Remote, Chicago

- Automated 80% of manual phone calls made to vendors for shipment status updates.
- Integrated new Twilio phone call service with existing logistics management systems.
- Created CI/CD pipelines and version control systems for Twilio Flows using the Twilio Serverless API.
- Designed testing, deployment, and rollback strategies for Twilio Functions and greater team.
- Built Twilio Functions and monitoring tools using JavaScript, Python, and Azure Pipelines.

## Mid-Size Financial Technologies Firm

Remote, Chicago

- Evaluated financial standing of 100k+ customers daily for potential credit line increases.
- Implemented Kotlin microservices leveraging Kafka message queues for resiliency.
- Designed org's first GitHub Actions pipeline which served as template for 20+ other developer teams.
- Coordinated Kubernetes deployments and database upgrades with infra team.

## Fortune 60 Financial Services Firm

Remote, Chicago

- Reduced new product onboarding from months to weeks by redesigning loan calculators.
- Leveraged Apache Spark and Scala to execute big data workflows on loan portfolios.
- Built data lake warehouses, designed pre-processing queries, and coordinated Spark job runners.
- Supported successful delivery of new credit card product built with Java Spring microservices.
- Optimized MongoDB queries so that 25 transactions-per-second objective was satisfied.

## Education and Certifications

- **M.Sc. Computer Engineering**, Purdue University, West Lafayette, Indiana. **Jan 2021 – Dec 2023**  
**Relevant Coursework:** Compilers, Data Structures, Algorithms, Networking, Machine Learning, Artificial Intelligence, and advanced mathematics (linear algebra, probability, statistics, calculus).  
**Projects:** C-like language and compiler, ML classification for credit fraud, recreation of “Adapters” for parameter-efficient finetuning of deep neural networks.
- **AWS Certified Developer – Associate**. **Issued Feb 2022**
- **B.Sc. Computer Engineering**, Ohio State University, Columbus, Ohio. **Aug 2016 – Dec 2020**