

Akshay Chiwhane

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Education

University of Michigan

Ann Arbor, MI

B.S.E in Computer Science

September 2014 – April 2018

- **Key Courses:** System Design in C++, Distributed Systems, Operating Systems, Networks, Web Databases & Information Systems, Machine Learning, Artificial Intelligence, Computer Organization, Data Structures and Algorithms, Linear Algebra, Probability

Experience

DRW

Chicago, IL

Senior Software Engineer – Risk Management

March 2019 – Present

- Designed and implemented real-time derivatives risk decomposition system using Python, Elixir, and Kubernetes
- Redesigned and scaled existing risk analysis pipeline using a functional, reactive architecture implemented in Elixir, C++, and Kubernetes

DRW

Chicago, IL

Junior Software Developer – Trading Infrastructure

July 2018 – March 2019

- Improved API response times of internal trade volume monitoring tool by 30x in Ruby on Rails
- Implemented and integrated an LCH margin calculation tool into internal margin calculation framework to simulate portfolio margins under different market conditions using Clojure

DRW

Chicago, IL

Software Engineering Intern - Soybean Options Desk

June 2017 – August 2017

- Provided insight into new trading strategies for agriculture options markets by building data analysis tools and high-throughput backtesting pipelines for traders using Python, numpy, pandas, and slurm
- Improved efficiency of trade capital monitoring system by writing Tableau Web Data Connectors using JavaScript and Flask

Deepfield Networks

Ann Arbor, MI

Software Engineering Intern

May 2016 – September 2016

- Improved speed and robustness of critical part of DDoS (Distributed Denial of Service) attack detection pipeline by architecting, developing, and optimizing DDoS analysis library using Python
- Gained familiarity with Agile and scrum (Atlassian Jira), test-driven development, and continuous integration methodologies (Jenkins)

Skills

Programming Languages: C++, Python, Elixir

Frameworks/Technologies: Django, Tornado, Flask, Redis, Jupyter Notebooks, scikit-learn, pandas, numpy, etcd, MySQL, PostgreSQL, slurm, Hadoop, MapReduce

Languages: English (native fluency), Marathi (native fluency)

Projects

VideoCDN: A HTTP proxy and CDN optimized for video streaming with adaptive bitrate selection and load-balancing, written in C++

StaticRouter: Designed and implemented a static router with an implementation of ARP and ICMP, written in C++

ShardKV: A scalable, sharded key-value store backed by Paxos, written in Go

PongWithMe: A game of pong where players use their phones to control paddles on a screen. Won 1st Place for the Best Use of Microsoft Platforms at MHacks IV

Spar: An async programming library written in Scala