Akshay Chiwhane

Phone: 248-278-1152 — Email: achiwha@umich.edu — Github: achiwhane — Linkedin: /in/achiwhane

Education

University of Michigan   Ann Arbor, MI
B.S.E in Computer Science; GPA: 3.46/4.00   *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
Software Engineer – Risk Management   *March 2019 – Present*
- Designing and implementing fault-tolerant, service-oriented fixed-income portfolio risk system using Python, Elixir, and Kubernetes
- Redesigned and scaled derivatives 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   *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, and pandas
- 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++, C, Python, Scala, Go, MATLAB, Swift

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