SHREYAS PANHALKAR

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WORK EXPERIENCE

Software Engineer, Intern

A9.com (Amazon), Palo Alto, CA

May 2018 – August 2018

- Worked with *Amazon Ad Exchange* team on evaluating and improving the performance of *Amazon Ad Identity Platform* which receives 10 billion requests per day.
- Reduced issue investigation time from 2 days to 4 hours by building Ad analytics dashboards using Jupyter on large-scale distributed logs in Apache Hive.
- Built a system using DataSketches, data pipelines, and MySQL to improve HQL query speed by several hours.

Senior Software Engineer

Sokrati, Pune, India

June 2014 - July 2017

- Implemented a scalable and distributed real-time event processing system using Storm and Kafka to launch Ads on Google AdWords which housed 2 million daily events.
- Designed and developed MARS a monitoring and alerting system using OpenTSDB a time series database to track advertising metrics such as Click through Rate, Cost Per Click & revenue.
- Improved the performance of systems by 3X by batch processing the data using Apache Storm and Kafka.
- Developed a distributed and config-driven system to attribute video views to Google Ad clicks using MapReduce and Amazon Redshift.
- Built more than 10 web apps using HTML, Backbone.js and wrote various web services using Java, Hibernate, and Spring.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript, C

Frameworks & Technologies: Storm, Kafka, MySQL, Redis, Android, S3, Node.js, Amazon Redshift, Hive, DataSketches,

Hibernate, Flask

Tools: Android Studio, Vim, Eclipse, SVN, Git, Linux, Jupyter

EDUCATION

Baltimore, MD

University of Maryland, Baltimore County

2019

M.S. in Computer Science.

Coursework: Design and Analysis of Algorithms, Advanced Operating Systems, Advanced Computer Architecture, Service Oriented Computing, Machine Learning, Quantum Computation, Information Theory, Data Science

Pune, India

Pune Institute of Computer Technology

2014

B.S. in Computer Science.

Coursework: Discrete Structures, Data Structures & Algorithms, Programming & Problem Solving, Advanced Databases.

PROJECTS

Chuknu - A Smart Sales Assistant

Java, Android, MySQL, Kafka, Storm, Node.js

• Led and developed an android app at *Sokrati* which is used by 1000+ small and medium businesses in India to manage sales and launch Ads on Google AdWords.

Nexter - A Personalized Book Recommender

JavaScript, Python, MySQL, Redis

• Developed a chrome extension to recommend books based on user's Twitter data.

PyMusicFs

Python, FUSE, Redis, Fuzzy Search

- Implemented a Filesystem in Userspace to stream songs via YouTube/Tunefind.com featured in TV shows and movies.
- Achieved 50% improvement in generating a directory structure by leveraging Redis cache.

WIND (WIND Is Not Dropbox)

Python, Snappy, AES256, S3, FUSE, Berkley DB

- Designed and developed a Filesystem in Userspace to backup files on Amazon S3.
- Achieved a significant space optimization using data deduplication and Snappy compression.

The Curious Case of Learned Indexes

PyTorch, C, Neural Networks

• Implemented a POC of Google's paper - *The Case for Learned Index Structures* — which posited that database indexes can be replaced using machine learning models.

ADDITIONAL EXPERIENCE

- Organized JavaTar a weekly speaker series at Sokrati, which sparked discussions among developers on topics ranging from advanced data structures e.g. bloom filters to concurrency frameworks such as AKKA.
- Interviewed more than 150 candidates for the positions of Software Engineer at Sokrati.