Andrei Maximov

https://github.com/andreimaximov

EDUCATION

UC SAN DIEGO

B.S. in Computer Science
October 2014 - Present | La Jolla, CA
Jacobs School of Engineering
Provost Honors
Cum. GPA: 3.83 / 4.0
Major GPA: 4.0 / 4.0

LINKS

https://github.com/andreimaximov
http://andreimaximov.com

COURSEWORK

Advanced Data Structures
Algorithms
Operating Systems
Computer Architecture
Parallel Computing
Advanced Graphics
Neural Networks and Machine Learning
Calculus
Linear Algebra

SKILLS

PROGRAMMING

Proficient
C++ • Java • Python
Experience
Rust • Scala • Lua • JavaScript • PHP • OCaml • C
Familiar
SQL • Bash

TOOLS

Datastores
PostgreSQL • MySQL • Redis • Memcached • Kafka • HDFS
Tools
Apache Spark • Apache Storm • Hadoop MapReduce • Cascading
Other
Angular 2 • React • Git • Mercurial

EXPERIENCE

FACEBOOK | Software Engineering Intern

September 2017 – Present | Search Ranking Infra | Menlo Park, CA

- Developed and released a stream processing platform in C++ for efficiently approximating high weight elements in a sliding window.
- Increased time granularity for "trending X" uses cases such as for relevance experiments in video search using top-k features.
- Algorithm based on ideas from Maintaining Stream Statistics over Sliding Windows by Datar, Gionis, Indyk, and Motwani.

QUORA | Software Engineering Intern

June 2017 – September 2017 | Infra/Data Platform | Mountain View, CA

- Designed and built a distributed system for monitoring realtime and historic infrastructure metrics using Scala, Apache Spark, and Kafka with improved reliability and scalability for future growth.
- Improved Python tooling with new disaster mitgation utilities such as MySQL query blacklisting.

GOOGLE | Software Engineering Intern

June 2016 – September 2016 | Chrome Apps | Mountain View, CA

- Developed an Object Relational Mapping abstraction for integrating the Apps Admin SDK as a datastore into App Maker.
- Used Java and JavaScript to create a query engine on top of the Admin SDK with filtering and relational support.

EFOLDER | Software Developer Intern

June 2014 – May 2016 | Mountain View, CA

- Developed a reporting system based on the Lambda Architecture using Java on Hadoop MapReduce and AWS Lambda for Kinesis stream processing.
- Built a MapReduce abstraction with Cascading for improved data pipeline management, schema validation, and simplified join algorithm on graph data.
- Implemented an automated billing system using PHP and PostgreSQL responsible for processing a majority of eFolder's revenue.

PROJECTS

PATHTRACER | C++ Rendering Engine

- Developed a physically accurate rendering engine with support for Monte Carlo global illumination, fresnel reflections/refractions, texture mapping, glossy surfaces and that probabilistically approximates the Rendering Equation.
- Utilizes Bounding Volume Hierarchies for maximum performance on complex scenes and multi-threading to parallelize chunk rendering.

PROGRAMMING PUZZLES | C++, Python, Java

- I enjoy solving Codeforces and HackerRank programming puzzles and learning new algorithms/data-structures in my free time.

INTO-IT GAMES | Game Development Startup, Lua, Java, C++

- Developed five cross platform iOS/ Android games in high school with Lua that reached over 100k downloads and 500k game sessions.

AWARDS

2013 Outstanding Achievement in AP Physics C - Mechanics