Omkar Salpekar

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EXPERIENCE

Facebook | Software Engineering Intern   May 2018 – Aug 2018
- Implemented optimizations on LLVM-based compiler including class name and instance variable compression to reduce application binary size by up to 3MB.
- Designed efficient optimization to reduce metadata size in binary when compiling with dynamically linked libraries, and blacklisting dynamically loaded classes in clang.

RISELab (previously AMPLab) | Research Assistant   Nov 2017 – present
- Working with Ion Stoica and Anthony Joseph on Pandas on Ray, a distributed DataFrame library built to accelerate Pandas (Python Data Science library). Achieved 4x speedup over Pandas on an 8-core machine
- Optimized library performance by designing DataFrame grid partitioning scheme and implemented efficient distributed statistical methods for data stored across a cluster of machines

Tanium | Software Engineering Intern   May 2017 – Aug 2017
- Built incremental search feature that predicts queries/actions that users send to a large enterprise network (In production across over 10 Million computers that use Tanium)
- Used query prediction to preemptively cache critical security data such as undeployed patches to reduce system delay

AMPLab | Research Assistant   March 2017 – Dec 2017
- Worked with Scott Shenker on speeding up distributed microservices-based applications deployed on Kubernetes/Docker Swarm by mitigating system-wide performance bottlenecks
- Designed a Bayesian Optimization-based system to efficiently find bottlenecks by selecting containers and incrementally stressing CPU, Network, and Disk I/O

Texas Instruments | Software Engineering Intern   May 2016 – Aug 2016
- Built a C library that manages data streams from sensor networks using a wireless microcontroller unit
- Designed evaluation module for an 8-bit register and I/O expander in x86 Assembly (in production)

SETI Research Center | Research Assistant   Aug 2016 – April 2017
- Designed convolutional neural networks to identify radiofrequency interference and corrupt signals from large datasets of spatial scans using Tensorflow and Spark for distributed model training
- Wrote a web application to crowdsource generation of training set, which was a mapping of signal waterfall plots to type of radiofrequency interference

Free Ventures | Managing Director   Sep 2015 – present
- Lead incubator at The House that provides mentorship and support to early-stage Berkeley startups
- Driving relationships with top seed and early-stage venture capital firms, and building expansive network of mentors and advisors for portfolio companies
- Helped portfolio companies raise over $33 Million, and advised 6 companies accepted to Y Combinator

EDUCATION

University of California, Berkeley   Aug 2015 – May 2019
BS in Electrical Engineering and Computer Science, Senior

Regents' and Chancellor's Scholarship, Accel Scholar

Coursework: Parallel Computing (graduate), Operating Systems, Databases, Artificial Intelligence, Networking, Security, Algorithms, Data Structures, Computer Architecture, Signals and Circuits

SKILLS

Python, C/C++, Javascript, Java, SQL, Tensorflow, Pandas, Apache Spark, NodeJS, AngularJS, Golang, Hadoop