SRUJUN THANMAY GUPTA

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Champaign, IL | Aug 2014 – May 2018

Computer Engineering & Business Minor

GPA: 3.78 | James Scholar | Dean's List

Distributed Systems	Operating Systems	Algorithms
Computer Security	Computer Networks	Parallel Programming
Linear Algebra	Machine Learning	Finance
International Business	Accounting Principles	Marketing

EXPERIENCE

PURE STORAGE

Mountain View, CA | Software Engineering Intern

Summer 2016

- Developed a framework for petabyte-level scale-out storage on distributed storage nodes
- Integrated object and block storage interfaces using Red Hat's Ceph Storage software
- Multi-node deployment on Pure Storage's All-Flash arrays, one of the first projects to do so

Summer 2017

- Created a framework for customer-driven management of apps on the Purity //RUN platform
- Allows customers to securely download, and configure app packages using scalable, cloud-backed services
- Integration with CI tools drastically improved app developer experience within the company

UIUC – CS/ECE

Champaign, IL | Undergraduate Researcher

February 2017 – Present

- Creating a system benchmarking tool for stream processing using Apache Samza
- Evaluate various types of stream processing workloads on the given system to judge real-workload performance
- Co-advised by Prof. Indranil Gupta & Shadi A. Noghabi

ASSOC. OF DATA SCIENCE & ANALYTICS

Champaign, IL | President & Executive Board Lead

September 2014 – May 2017

- Largest student-run Data Science group at UIUC
- Lead efforts in expanding Data Science & Machine Learning across the Engineering and Business schools in the University
- Ran workshops and projects on AWS, Apache Spark & Hadoop, and SciKit-Learn

PROJECTS

Auto-Scaling Jupyter Notebooks using AWS/Docker

July 2016 – March 2017

- Created a multi-server Jupyter Python Notebooks deployment for 100+ users
- Built using Docker containers, and orchestration through Docker Swarm on AWS EC2 Instances
- Used for Data Science workshops for students in UIUC

Solving Hand-Drawn Mazes on an FPGA

August 2015 – December 2015

- Created an Edge-detection algorithm based on Sobel filtering to detect mazes in images
- Implemented in C/SystemVerilog on an Altera NIOS II-based processor running on an FPGA
- Solution is generated live and displayed procedurally

Machine Learning Algorithms Library

June 2015 – March 2016

- A small library of machine learning algorithms like linear and logistic regression, and feed-forward neural networks
- Based on Andrew Ng's CS 229 course at Stanford University
- Programmed in Python from scratch using Numpy and Scipy

MazeOS – x86 Operating System

October 2016 – December 2016

- Built a minimal operating system for the x86 architecture
- Support for round-robin scheduling, user-space programs, bash-like shell
- Implemented drivers for keyboard, mouse, and video graphics (VGA)

Distributed Key–Value Store

April 2017

- Implemented a distributed hash-table based on Chord
- Eventual consistency mechanics with failure recovery
- Scalable to many nodes with data stabilization after introduction/removal of any nodes

Ray-tracing 3D Environments in Rust

December 2016 – January 2017

- Scene renderer project to learn Rust
- Implemented a text parser to understand scene data, used ray-tracing to calculate shadows and lighting, and rendered to image file

SKILLS

Proficient with: Python, C/C++, Java, Bash

Apache [Spark, Storm, Kafka, Samza], Ceph, NumPy/SciPy

Familiar with: Rust, SQL, Javascript, SystemVerilog

Docker, Hadoop, SciKit-Learn, D3.js