

Shyam Patel

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Education

Rutgers University

Sept. 2017 - May. 2021

B.S. IN COMPUTER SCIENCE

New Brunswick, NJ

- Relevant Coursework: Operating Systems, Algorithms, Internet Technology, Introduction to Artificial Intelligence (Graduate), Brain Inspired Computing (Graduate), Deep Learning, Graph Theory, Systems Programming, Discrete Mathematics and Probability, Differential Equations

Experience

Cardinal Capital Management

Nov 2022 - July 2023

SOFTWARE DEVELOPER

- Collaborated with traders to build and optimize features/improvements for the prop shop's internal systems to help traders better execute their fundamental or automated strategies
- Some work includes: building reports for EOD high frequency trade analysis, and rewriting internal system for accepting/persisting floor trades
- Primarily work with **Java**, Junit, **Python**, **General Data Science libraries (Pandas, plotly, etc)** and **C++** here and there

BNY Mellon

Aug 2021 - Oct 2022

SOFTWARE ENGINEER - INFRASTRUCTURE

- Worked on the Kafka Dev team to deploy Apache Kafka on an internal infrastructure as a service platform which automatically handles tasks such as managing Zookeeper clusters and allowing teams to easily deploy applications for both internal and external services
- Built and maintained new features while aiding in a highly reliable platform to help deploy applications capable of handling millions of dollars
- Worked with Apache Kafka, **Java**, Ansible, Junit, Cucumber/Gherkin, Bash Scripting as well as other frameworks and technologies

Rutgers University - Teaching Assistant and I-lab Assistant

May 2020 - May 2021 (TA)

Sept. 2019 - May 2021 (I-Lab)

TEACHING ASSISTANT AND I-LAB ASSISTANT

- As a TA, I taught grad students the fundamentals of data science in **Python** and how to use libraries like **Matplotlib**, **Pandas** and **Numpy**
- As I-Lab assistant I would aid and teach students in a myriad of topics. Some include: Algorithms, Operating Systems, Artificial Intelligence

LEFTE Lab

Jul. 2020 - Sept. 2020

RESEARCH ASSISTANT

- Designed implemented and optimized concurrent as well as asynchronous image processing for CV driven drone navigation
- Used **Python**, and OpenCV, and with **threading and asyncio libraries**

Bromberg Lab

Apr. 2019 - Oct. 2019

RESEARCH ASSISTANT

- Developed Openstack managers for infrastructure in local and cloud compute clusters
- Implemented data cleaning scripts that help process genomic data and managed MySQL databases for genomic and proteomic data
- Worked with **Python**, **Docker**, Openstack, Javascript, Laravel and **MySQL**

Skills

Programming Java, Python, C, C++

Frameworks/Libraries General Data Science Libraries (Numpy, Pandas, etc), Plotly, MySQL

Technologies Git, Docker, Linux (CentOS, Ubuntu), Multithreading

Projects

BERT-CNN-Toxic-Speech-Classfier

Dec. 2020

REPO: SHYAMP99/BERT-CNN-TOXIC-SPEECH-CLASSIFIER

Group

- Employed Google's Bidirectional Encoder Transformation for Transformers (BERT) architecture in conjunction with a Convolutional Neural Network to classify online comments via 6 toxic labels: Toxic, Severe Toxic, Obscene, Threat, Insult and Identity Hate
- The model was trained using a 159,571 datapoint dataset and achieved >93% ROC-AUC scores on all 6 labels
- Built using: **Python**, Pytorch (with Cuda), Hugging Face, **Plotly**, **General Data Science Libraries (numpy, pandas, sklearn, etc.)**

Rust Ping

Sept. 2020

REPO: SHYAMP99/PING-IN-RUST

Solo

- A ping client that takes an IPv4/IPv6 address or URL and sends an ICMP echo request to the respective location with the **Rust standard library**

User Level Memory Management Simulator

Apr. 2020

REPO: SHYAMP99/VIRTUAL-MEMORY

Partner

- Designed and implemented user level memory management with a Translation Lookaside Buffer using **C Standard Library**
- Handles address translation from virtual to physical addresses, fragmentation in both virtual and physical memory and malloc/free operations