



## EDUCATION

### UNIVERSITY OF CALIFORNIA, DAVIS

CA, United States

#### • *Master's in Computer Science (GPA: 4.0/4.0)*

Sep 2018- Dec 2019 (Expected)

- Coursework: Operating Systems, Analysis of Algorithm, Machine Learning, Artificial Intelligence, Distributed Database Systems
- Graduate Teaching Assistant for CHE2A and ECS 20 (Discrete Math for CS)

### INDIAN INSTITUTE OF TECHNOLOGY (IIT-BHU), VARANASI

India

#### • *Bachelor of Technology in Electrical Engineering (GPA: 9.17/10.0)*

July 2014– May 2018

- Coursework: Computer Programming, Mathematical Modelling, Operations Research, Macroeconomics, Probability and Statistics
- Undergraduate Teaching Assistant for CSO-101, Computer Programming (Data Structures and Algorithms)

## SKILLS

- **Programming Languages:** C, C++, Python, Java, Shell Scripting, Verilog, SQL, HTML
- **Technologies:** AWS (S3, DynamoDB, EMR), Git, MATLAB, JUnit, Tableau, TensorFlow, Eclipse, IntelliJ, Guice, Apache Hive, Pytorch
- **Interests:** Data Structures, Algorithms, Database management, Analytics, Solving puzzles

## WORK EXPERIENCE

### AMAZON.COM INC, United States

#### Software Development Engineer Intern

June - September 2019

- Part of Amazon's **Remarketing Engineering - Paid Search** team that is responsible for Amazon's Paid Ads (text ads and shopping ads) on Search Engines like Google, Bing and Yahoo.
- Designed and implemented an end-to-end internal service using AWS technologies that is robust and scalable to handle data of **15TB**.
- Service runs daily to accept the Amazon's customers' requests to retrieve their data that Amazon (paid search) uses. Requests are responded by the customer specific data, stored by the team.
- **Exposure:** Java, SQS, DynamoDB, EMR, EDX, JUnit, Guice and Hive

### MENTOR GRAPHICS LIMITED, India

#### Software Development Intern

May - July 2017

- Worked as part of **CDC** (Clock Domain Crossing) team of company, for development of **lint tool for HDLs** (Hardware Description Languages) to check for potential mismatch towards simulation and synthesis
- Added **20 checks** in the lint tool and for each check, programmed around **50 test cases in Verilog/System Verilog** to test the lint tool
- My contribution directly benefited the company and helped them meet the deadline for development of tool
- **Exposure:** C/C++, GDB (GNU Debugger), Shell Scripting, LINUX, Verilog/System Verilog

## PROJECTS

### Peer-to-Peer File Backup System

Operating Systems, 2019

- Implemented a distributed P2P file storage and Backup System focusing on reliability and high bandwidth operation with maximum Backup speed of **440KB/sec** and Retrieval speed of **200KB/sec**. Robustness of the system can be customized according to the priority of files being backed up.
- **Exposure:** Google Cloud Platform, Python, Shell script, Virtual Machines, Networking

### Fake review Detection

Machine Learning, 2019

- Trained a model on Yelp review [dataset](#) (**600k** reviews, **250k** reviewers and **5k** restaurants) to identify fake reviews using techniques like Doc2Vec, FastText and LSTM and compared the results. FastText technique along with down-sampling and using review-centric and reviewer-centric features gave the best results with **AuC of 0.86** and **loss of 0.21**.

### Design Visualizations

Information Visualization, 2019

- Designed Choropleth Map, TreeMap and Dotted Map Visualizations. Designed Zoomable TreeMap using D3 and jQuery.
- **Exposure:** Tableau, HTML, Javascript, CSS, D3, jQuery

### Product Classification and Price Prediction

Artificial Intelligence, 2018

- Trained Faster-RCNN on base network of VGG-16 and Inception Resnet V2 that allow users to identify multiple objects along with their prices in the input image. Product-price dataset is generated using Amazon's database and Open Images Dataset V4 is used for images.
- **Exposure:** Deep Learning, Neural Networks, TensorFlow, Keras, Google Colaboratory

### Tuning of PID and fractional PID Controllers

Control Systems, 2017

- Tuned PID controller for Inverted Pendulum on Cart model and tuned fractional PID using Ziegler–Nichols-type rules on MATLAB.
- **Exposure:** Fractional calculus, Fractional PID, Robotics, MATLAB/SIMULINK

### Web-Based Library Management System

DBMS, 2017

- Built a web-based application for controlling and monitoring the transactions in the library. **Exposure:** PHP, MySQL