Ashutosh Agrawala

• *Dallas,Texas* •*ashutosh.agrawala@utdallas.edu* •*+1(469)-642-3526*
https://github.com/ashutosh1141/Fall-18-Projects

EDUCATION

UNIVERSITY OF TEXAS AT DALLAS **Dallas, Texas**
M.S Computer Science (GPA: 4.0/4.0) *Aug 2018-August 2020*

- Specialization in Machine Learning and Intelligent Systems
- Recipient of **Erik Jonsson graduate scholarship** for the year2018-19.
- **Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Discrete Mathematics, Database Design, Machine Learning, Advanced Algorithms

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI **Pilani, India**
B.E (Hons.) Electronics & Instrumentation *Aug 2012-July 2017*

- **Relevant Coursework:** Object Oriented Programming, Computer Programming, Microprocessors & Interfacing, Digital Design, Probability and Statistics, Linear Algebra & Complex numbers, Differential Equations, Advanced Calculus

SKILLS

Programming: Java, Python, C, C++, SQL, Linux, HTML, CSS, JavaScript, TensorFlow, Keras, ScikitLearn

Leadership: Organizer, Bits Embryo (A body that organized talks by eminent and successful folks in their particular fields)

EXPERIENCE

ANSYS Inc. **Pittsburgh,USA**
Software Development Intern *May 2019-present*

- Enhanced the **statistical** and **Machine Learning** capabilities of our simulation tool for Anomaly detection in time-series data from simulations
- Used algorithms like **Clustering**, **Isolation Forest**, **STL decomposition**, **Local Outlier Factor** for anomaly detection with the help of machine learning libraries like **ScikitLearn and statsmodels**
- Generate visualizations of all the implemented algorithms using **Matplotlib** and **Seaborn**
- Development of **User Interface** to facilitate model selection for anomaly detection using **Windows Forms** and **IronPython**
- Developed a model to **predict** the end time of simulations using **FFT** forecasting with the help of **FFTW** library for performing Fourier and Inverse Fourier transforms.

ORACLE FINANCIAL SERVICES SOFTWARE **Bengaluru, India**
Application Developer, OFSAA platform development *July 2017-July 2018*

- Implemented **database security** features like transparent data encryption (**TDE)** and **GDPR** using **Java**,**SQL**
- Implemented the migration of **logging** utility from **Apache log4j**1.x to **log4j2**.x
- Supervised the development, unit testing and integration of enhancements for OFSAA platform installer by following **Agile** Software development life cycle
- Redesigned the system configuration and security management system screens using **Oracle JET**, a proprietry **javascript** library of Oracle.

INTEL CORPORATION **Bengaluru, India**
Software Development Intern, Intel labs *July 2016-December 2016*

- Developed an **autonomous swarm robotics** PoC for search and rescue operation at Natural Disaster sites
- Implemented the **Ultra-Wideband** (**UWB**) based **positioning** system of robots in the swarm roboticsPoC
- Designed an algorithm in **C/C++** for error reduction in distance ranging data for positioning caused by physical obstacles
- Integrated **LIDAR** and **ultrasonic** sensors in the PoC for obstacle detection

ACADEMIC PROJECTS

DESIGN OF MODIFIED UNIX V6 FILE SYSTEM *Oct 2018-Dec 2018*

- Implemented **Unix V6 file system** to support files up to **4gb** size using **C** and **Unix** systemcalls
- Implemented **Make directory (mkdir)** and **delete directory (rm)** functions for the newly created filesystem
- Implemented **file copying** from an external file to V6 file system file and vice versa

PREDICTION OF DAILY STOCK RETURNS *December 2018*

- Using stock data from **Quandl**, performed time series analysis of data to develop a model for prediction of stock prices
- Developed the model using **KNN** and **Random forest classifier** in **Python** using **NumPy**, **Pandas**, **ScikitLearn**