ADITYA RATHOD

Undergraduate Computer Science Student at The University of Texas at Dallas
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EDUCATION

The University of Texas at Dallas ***Aug. 2019-May 2023***

Freshman, Computer Science, Collegium V Honors Program

Relevant Coursework: Discrete Math for Computing I, Computer Science II

Student orgs: Association for Computing Machinery, Artificial Intelligence Society, Codeburners (competitive programming)

Irvington High School, CA ***2015-2019***

WORK/RESEARCH EXPERIENCE

Research Intern ***Aug. 2019 – Present***

Polycraft World, Center for Engineering Innovation, The University of Texas at Dallas

- Assisting in development of an AI training environment generation tool for researchers as part of lab's participation in DARPA's SAIL-ON initiative
- Tools utilized include the Java programming language and project management/collaboration tools such as Github, Microsoft Teams, SharePoint, and Jira

Undergraduate Researcher ***Jun. 2019 – Aug. 2019***

Clark Summer Research Program @ The University of Texas at Dallas

- Learned machine learning and deep learning concepts, from data preprocessing to model creation
- Implemented Sequence-to-Sequence model for abstractive news summarization in Keras/TensorFlow
- Scraped news websites using Requests/BeautifulSoup to create a novel labeled dataset of 25,554 articles
- Presented research at symposium with university staff, department leaders, and faculty in attendance

Robotics/Programming Instructor ***Jul. 2017 – May 2019***

Impressive Minds Academy

- Instructed students ages 8-13 in robotics, programming, and game development through creation of projects
- Taught the basics of LEGO EV3, introduced students to programming through Scratch, Tynker, and Python

PROJECTS

Mushroom Classification Decision Tree *github.com/applecrazy/mushroom-decision-tree*

- Implemented a multi-branched decision tree model from scratch using vanilla Python code and NumPy
- Trained on the UCI Mushrooms Dataset, achieved 100% accuracy on the test set

Credit Card Fraud Detection *github.com/applecrazy/fraud-detection*

- Utilized open dataset of transaction attributes, amount, and fraud classification information to develop neural network-based classification model using TensorFlow and Keras
- Achieved 99.94% test accuracy, with F_1 score of 0.81, learned how to deal with skewed data

FLEX *github.com/applecrazy/flexapp, flexapi*

- Developed + deployed mobile-friendly Vue.js web application for peers to schedule office hours with teachers
- Developed Node + Express based REST API to interface with existing appointment database

CERTIFICATIONS

Machine Learning ***Aug. 2018***

Coursera, Stanford University

- Earned verified certificate for an online non-credit college course and offered through Coursera
- Learned basic theory behind ML techniques: linear/logistic regression, PCA, SVMs, neural networks

SKILLS

- Python with Pandas, NumPy, Keras/TensorFlow, for data processing and analysis
- Basics of Machine Learning (Regression, Decision Trees), Deep Learning (FCNs, CNNs, RNNs/LSTMs)
- React.js web development with React-Router & Redux
- Hands-on experience with Octave/Matlab, Java, JavaScript/Node.js