

# ADITYA RATHOD

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## EDUCATION

### The University of Texas at Dallas

May 2023

*Bachelor of Science in Computer Science; Part of Collegium V Honors Program*

- Awards: National Merit Scholarship (1 of 8000 students nationwide), 2019-2023
- Coursework: Discrete Math for Computing I, Computer Science II (C++), AP Computer Science (Java),
- Student Organizations: Association for Computing Machinery, Artificial Intelligence Society, Codeburners
- Leadership: HackAI Operations Coordinator at Artificial Intelligence Society

## SKILLS

- Python with Pandas, NumPy, Keras/TensorFlow, for data processing and analysis
- Fundamentals of Machine Learning (Regression, Decision Trees, Neural Networks, CNNs, RNNs)
- Hands-on experience with Octave, Java, JavaScript/NodeJS, ReactJS
- Intermediate C++, with the STL (have implemented data structures in the language)

## WORK/RESEARCH EXPERIENCE

### Research Intern

Aug. 2019 – Present

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

- Assisting in development of AI training environment tool for researchers as part of lab's participation in DARPA's SAIL-ON initiative, utilizing Java, Github, and JIRA.

### Undergraduate Researcher

Jun. 2019 – Aug. 2019

*Clark Summer Research Program @ The University of Texas at Dallas*

- Implemented Sequence-to-Sequence model for abstractive news summarization in Keras/TensorFlow
- Scraped news websites using Python Requests/BeautifulSoup to compile a novel dataset of 25,554 articles
- Presented findings at poster symposium with university staff, department leaders, and faculty in attendance

### Robotics/Programming Instructor

Jul. 2017 – May 2019

*Impressive Minds Academy*

- Introduced class of 12-14 students aged 8-13 to the basics of LEGO robotics and Python programming.

## SELECTED PROJECTS

### Credit Card Fraud Detection

[github.com/applecrazy/fraud-detection](https://github.com/applecrazy/fraud-detection)

- Utilized Kaggle dataset of transaction attributes and fraud labels to develop fully-connected neural network 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

### Liform – Medical Bill Transparency (HackRice 9.0)

[devpost.com/software/liform](https://devpost.com/software/liform)

- Built web app to promote medical billing transparency by allowing patients to compare procedure costs
- Used ReactJS, NodeJS/Express/MongoDB and implemented data pipeline to ingest hospital price data

### Mushroom Classification Decision Tree

[github.com/applecrazy/mushroom-decision-tree](https://github.com/applecrazy/mushroom-decision-tree)

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

## FLEX

[github.com/applecrazy/flexapp](https://github.com/applecrazy/flexapp), [flexapi](https://github.com/applecrazy/flexapi)

- Developed/deployed Vue.js web app for high school office hours scheduling; 80 recurring users at peak
- Developed NodeJS + Express based REST API to interface with existing database