

# Abhi Dhir

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## Education

### University of Texas at Austin

PURSuing B.S. IN COMPUTER SCIENCE AND MATHEMATICS

- Relevant Coursework: Neural Networks, AI, Data Mining, Software Engineering, Data Structures, Stochastic Processes

GPA: 3.92 (Honors)

Aug. 2018 - Exp. May 2022

## Work Experience

### Microsoft

SOFTWARE DEVELOPMENT INTERN

- Built, tested, and deployed Outlook Add-in with in order to assist thousands of customer support tickets.
- Used Azure Data Explorer, React, and machine learning in continuous delivery of quality application features
- Presented weekly demos to multiple service teams and customers to gain feedback and prioritize feature development

Seattle, CA

May. 2021 - Aug. 2021

### Atlassian

SOFTWARE DEVELOPMENT INTERN

- Built architecture of end-to-end notification service from scratch using AWS SQS, and Lambdas
- Provided customers with automated notifications via email and a slack bot for events they had subscribed to
- Created fully-automated CI/CD through bitbucket pipelines with unit-testing, linting, and deployment into various environments

San Francisco, CA

May. 2020 - Aug. 2020

### NCR

SOFTWARE DEVELOPMENT INTERN

- Rewrote legacy back-end API of application (Aloha) used by thousands of restaurant managers across the US
- Upgraded API to .NET Core from .NET Framework, and deployed application to Linux Docker running in Azure for better performance

Dallas, TX

May. 2019 - Aug. 2019

## Extracurricular Activities

### Texas Spacecraft Laboratory (TSL) - Pipeline Team Leader

Feb. 2020 - PRESENT

SEEKER TEAM

- Student-driven research group dedicated to designing and building hardware and software for space missions, in conjunction with NASA.
- Create full-pose estimation models ready for flight hardware along with streamlined data-generation and training pipeline

## Projects

### Predicting Stocks using Twitter Sentiments | Python (scikit-learn, pandas, nltk), Twitter API

Sep. 2019

- Utilized sentiment analysis from thousands of tweets to correlate the public opinion of a company with their stock prices
- Used machine learning algorithms to predict day-to-day changes in stocks taking into account tweet information and stock variance

### Portfolio Website | React JS, Bootstrap, Github API

Aug. 2019

- Personal portfolio website that I created using React and Bootstrap
- Includes API calls to github that dynamically generates a display of my pinned repositories

### Huffman Compression GUI and Backend | Java, Swing

May. 2019

- Bit level encoding algorithm with the ability to compress all file types
- Implements a Huffman Tree and a priority queue

### Measuring Repetition in Speeches using LZW | Python, RStudio

May. 2018

- Analysis of how repetition has increased over time in US presidential speeches
- Implemented the Lempel-Ziv-Welch compression algorithm in order to measure repetition of words and phrases

## Publications

### A Pipeline for Vision-Based On-Orbit Proximity Operations Using Deep Learning and Synthetic Imagery

Mar. 2021

IEEE AEROSPACE CONFERENCE 2021

### Real-Time, Flight-Ready, Non-Cooperative Spacecraft Pose Estimation Using Monocular Imagery

Feb. 2021

AAS SPACE FLIGHT MECHANICS MEETING 2021

## Skills

### PROGRAMMING LANGUAGES

- Python (numpy, pytorch, tensorflow, scikit-learn, pandas), Java, Typescript, C++, C#, SQL, x86, R

### WEB/MOBILE DEVELOPMENT

- Android Studio, Node JS, React, HTML, Bootstrap, Git, ~~TEX~~, .NET, AWS (EC2, S3, Lambda, SQS, SNS), Azure, Firebase