Abhi **Dhir**

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Education

University of Texas at Austin   *GPA: 3.92 (Honors)*
B.S. IN COMPUTER SCIENCE AND MATHEMATICS (DOUBLE MAJOR)   *Aug. 2018 - May 2022*
- Relevant Coursework: Neural Networks, AI, Data Mining, Natural Language Processing, Stochastic Processes, Game Theory

Work Experience

Google   *Mountain View, CA*
SOFTWARE DEVELOPMENT ENGINEER   *Aug. 2022 - Present*
- Used map-reduce, web mining, machine learning, and other techniques to synthesize quality information from large 3rd party health datasets
- Added 600k new health care practitioners to google maps/search results and insurance acceptance information to >400k locations
- Internationalized the hotline OneBox, working extensively with xFn peers to launch in >20 locales

Vana (Startup)   *San Francisco, CA*
SOFTWARE DEVELOPMENT INTERN   *Aug. 2021 - Jan. 2022*
- Developed data collection processes and 3rd-party integrations on web app that were used by thousands of people
- Used React, Hasura, RabbitMQ, Lambdas, and machine learning in a rapid development of changing business requirements
- Created architectural designs for various components in the Vana web app to ensure scalability in the future

Microsoft   *Seattle, CA*
SOFTWARE DEVELOPMENT INTERN   *May. 2021 - Aug. 2021*
- Built, tested, and deployed Outlook Add-in that assists hundreds of customer support issues
- Used Azure Data Explorer, React, and machine learning in continuous delivery of quality application features

Extracurricular Activities

Texas Spacecraft Laboratory (TSL) - Pipeline Team Leader   *Feb. 2020 - May 2022*
SEEKER TEAM
- Student-driven research group dedicated to designing and building hardware and software for space missions, in conjunction with NASA.
- Created 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*
- 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*
- 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*
- 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*
- Analysis of how repetition has increased over time in US presidential speeches
- Implemented the Lempel-Ziv-Welch compression algorithm in order to measure repition 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, LaTeX, .NET, AWS (EC2, S3, Lambda, SQS, SNS), Azure, Firebase