Chinmay **Deshpande**

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EDUCATION

Vanderbilt University   **August 2017 – May 2021**

- B.S. in **Computer Science |** Minor in **Mathematics**   *Nashville TN*
- **Relevant Courses:** Data Structures, Software Design, Operating Systems, Programming Languages, Algorithms, Linear Algebra

PROFESSIONAL EXPERIENCE

Amazon – Middle Mile Simulation and Data Insights Team   **May 2020 – August 2020**

Software Engineering Intern   *Seattle, WA*

- Worked on middle mile route planning simulation to be used for determining optimal distribution routes for all Amazon packages
- Built route planning capabilities for the simulation in Java allowing it to forecast distribution by using historical and forward-looking data
- Created a self-service portal in React to be used by the entire Amazon distribution network to simulate delivery routes and volumes based on custom inputs, and view the results in a Tableau dashboard to analyze route metrics

Wells Fargo – Prime Services Team –   **May 2019 – August 2019**

Software Engineering Intern   *New York, NY*

- Worked on new trading platform to be used by 100+ hedge fund clients that allowed for more data driven trade decisions
- Developed algorithm allowing clients to optimize trading strategy by minimizing tax implications of selling start of day positions
- Utilized NoSQL to clean and evaluate position data in MongoDB and Java to develop tax optimization algorithm

Southern Made Digital Laboratory – Moonshot Team   **January 2019 – April 2019**

Software Engineering Intern   *Nashville, TN*

- Helped develop proprietary applications which tested emerging technologies such as augmented and virtual reality for client use cases
- Built calendar application which used computer vision to identify custom markers and display an augmented reality calendar in mobile browsers

Principal Financial Group – Business Intelligence Analytics Team   **May 2018 – August 2018**

Software Engineering Intern   *Des Moines, IA*

- Led project to develop and train natural language processing model which identified and tagged data in both handwritten and typed insurance claim letters into 10+ categories
- Built model in Python using Keras and TensorFlow, deployed and trained it in Microsoft Azure Machine Learning Studio.
- Utilized model to identify fraudulent insurance claims by training it to recognize suspicious patterns in certain data points

Vanderbilt University – Computer Science Department   **August 2020 – Present**

Teaching Assistant – Operating Systems   *Nashville, TN*

- Built Operating System on a Raspberry Pi from scratch to be used as an example for future student assignments
- Held weekly office hours to help teach and reinforce topics such as processes, threads, concurrency, and memory management in C/C++.

PROJECTS

Tesla Supercharger Route Planning Simulator   **May 2020**

- Created an algorithm to find the optimal route for a Tesla road trip using the supercharger network which resulted in an average 85% improvement in runtime with a maximum 2% deviation from the optimal path time for Tesla cars driving between charging station
- Preprocessed distance heuristic factoring supercharger distances and speeds before running an adapted Djikstra's algorithm to simulate most efficient route

Protein Modeling Virtual Reality Application – Meiler Lab   **August 2018 – December 2018**

- Worked with computational biology laboratory to develop a virtual reality application that simulated the intermolecular forces between a protein target and ligand
- Created algorithm which allowed users to discover optimal protein-ligand binding affinity by minimizing Van Der Waals repulsive forces between molecules based on real time positional modeling

Investable Real Estate Model – Principal Financial IT Hackathon   **July 2018**

- Created an application on AWS which projected average house prices at the county level for the United States for use by Principal Financial Group's real estate investment division
- Led development of price prediction machine learning model in TensorFlow which projected the average house price on a county level using US census data.

SKIILLS

- **Programming:** Python, C++, Java, HTML/CSS, JavaScript, SQL, React Native
- **Software Tools:** AWS (EC2, S3, Lex, Lambda, Elastic Beanstalk, DynamoDB), TensorFlow, Keras, Pytorch, Microsoft Azure Machine Learning Studio, Git, Django