VASUDEV AGARWAL

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EDUCATION

Texas A&M University - College Station, TX **Aug 2021 - May 2025**

- **Major:** Computer Science, B.S. | **Minor**: Statistics | **GPA:** 3.65
- **Coursework:** Machine Learning, Foundations of Software Engineering, Intro. to Computer Systems, Data Structure & Algorithms, Programming Languages, Discrete Structure Computing,
- **Organization:** Codepath - Intermediate Technical Interview Prep & Web Development

WORK EXPERIENCE

Urban Resilience.AI - Student Research - College Station, TX **May 2023 – Present**

- Developed a Python program utilizing Pandas, NumPy, Stats and GeoPandas modules to analyze lifestyle recovery efforts after Hurricane Harvey
- Created user-friendly visualizations showing extreme areas of vulnerability including spatial graphs and a high-low recovery matrix.
- Automated the code of Ordinary Least Squares (OLS) model summaries to show how income, minority households, and flood-affected areas influence lifestyle recovery.
- Publication: N. Coleman, V. Agarwal and Mostafavi A. Homogeneity and Entropy Analysis of User-Level Recovery to Lifestyles, 2023. Pending submission to journal article. Spectus and SafeGraph POI aggr. data

TAMU SEC Directed Internship - College Station, TX **June 2023 – Present**

- Lead 6-member group in the development of a level 3 EV charging solution with a business integration.
- Researched required electrical components like AC/DC, DC/DC converter to construct a level 3 EV charger.
- Persuaded Texas Instruments stakeholder to invest in our solution in-person presentation.

Uhnder Inc. - Software Intern - Austin, TX **May 2022 - Aug 2022**

- Developed software in Python using agile methodology to perform real-time data analysis on Board-Level Reliability (BLR) data, critical component of ADAS (Advanced Driver Assistance System).
- Implemented 6 MVP features by engaging with clients to understand program requirements designing the program in a modular, user-friendly manner to foster usability and future developments.
- Guaranteed 24x7 hr. operation and robustness by back-testing the software over 2 years of historical data.
- Achieved 60% reduction in data analysis time by modeling data using linear regression based on industry standards while using Pandas, NumPy modules improving monitoring chip reliability.
- Minimized space usage by 50% through PyCharm debugging tool and the optimization of Pandas dataframe.
- Authored comprehensive "How-to" documentation for developed Python program, facilitating future development and ensuring knowledge transfer within team.

Uhnder Inc. - Intern - Austin, TX **Dec 2021 - Jan 2022**

- Developed a python program generating 6 types of graphs based on design simulations measurements to assist in data analysis.
- Optimized the generation of graphs by specifying attributes for better usability and functionality using matplotlib modules.

PROJECTS

Karura - University Rover Challenge (URC) **May 2023 - Present**

- Developing rover software for autonomous navigation in a multinational team by using ROS, Gazebo along with cameras and sensors to reach autonomous navigation to win university rover challenge.
- Researching and selecting Path Planning algorithms from LiDAR to vSLAM along with parts like Mini PC, IMU, GPS sensors and Depth camera for autonomous navigation.

Grand Theft Aggie Game **Aug 2022**

- Placed fourth place out of 40 teams in hackathon at Texas A&M University by developing a game using Pygame Python module which challenges students to reach destinations in earliest time.

SKILLS

Languages: C++/C, Python, Java, HTML, CSS, JavaScript, R language, SQL
Tools: Git, Slack, Microsoft Office, Kanban, Agile, Todoist, Notion, Jupyter Notebook