Kush Desai

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Education

The University of Texas at Austin
May 2022

B.S. in Electrical and Computer Engineering (Data Science and Information Processing) *GPA: 3.60/4.0*

Relevant classes Operating Systems, Algorithms and Data Structures, Probability, Linear Algebra, Software Implementation and Design (Honors), Data Science Principles, Digital Image Processing

Languages Python, Java, C, C++, Javascript

Technologies Robot Operating System, AWS, Azure, PyTorch, TensorFlow, Flask, OpenCV, Git

Experience

Socially Intelligent Machines Lab
September 2018 - Present

Research Intern *University of Texas at Austin*

- Researching **audio-based Reinforcement Learning** and **object recognition algorithms** under Dr. Andrea Thomaz
- Designed Human Robot Interaction experiments using **Python, TensorFlow, ROS, AWS** and **Javascript**

BP Innovation and Engineering
Summer 2020

Software Engineering Intern *Virtual*

- Designed an **optimal routing algorithm** for shipping to minimize carbon emissions by 30%
- Built a web interface hosted on **Azure** using **Python, Flask and SQL** while working in an **Agile environment**
- Won **Most Innovative Solution** in the intern hackathon as part of the Net Zero team

Freetail Hackers
January 2020 - Present

Logistics Director *University of Texas at Austin*

- Handled logistics for SummerHacks 2020, a virtual hackathon with **500+ worldwide attendees**
- Created the ultimate-hackathon-starter-guide resource to educate and provide resources to hackathon attendees

Projects

BEVO - Blind Environment Visualization Objects
TAMUHack

Best Use of Google Cloud, Best Accessibility Hack *2020*

github.com/kdesai2018/bevo

- Built a palm and object-recognition pipeline to help visually impaired individuals locate objects using audio cues using **Tensorflow, Google Cloud, Python** and **OpenCV**

ROS Object Recognition
Open Source

github.com/kdesai2018/ros-object-recognition *2019*

- Built and finteuned an **open source**, **Robot Operating System** based **real-time object detection** system using **Python, PyTorch, COCO and OpenCV**

Drowsy Driver
UT Makeathon

1st overall, Best in workplace safety *2019*

github.com/kdesai2018/drowsy-driver

- Developed an eye and grip tracking system using **OpenCV, Python** and **Arduino**
- Contributed this example to the **PyPI open-source face_recognition project** on Github

Tracer
HackMIT

devpost.com/software/tracer *2019*

- Built a game hosted on **AWS** to introduce young programmers to the debugging process using **Javascript** and **PIXI**

BetterKey
TAMUHack

devpost.com/software/betterkey *2019*

- Created a **genetic algorithm** in **Java** to create a keyboard layout **customized for the user** that minimizes typo collision by 60% (versus DVORAK) and increases typing speed by 10% (versus QWERTY)