ADITYA TAPSHALKAR

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EDUCATION

Master of Science in Computer Science ***Expected May 2022***
Georgia Institute of Technology | *Atlanta, GA* GPA: 4.00
- **Concentration:** Machine Learning

Bachelor of Science in Computer Science ***May 2021***
Georgia Institute of Technology | *Atlanta, GA* GPA: 3.50
- **Concentrations:** Intelligence, People
- **Minor:** Health and Medical Sciences
- **Coursework:** Artificial Intelligence (AI), Computer Vision (CV), Machine Learning (ML), Robotics and Perception
- **Honors and Awards:** High Honors, Zell Miller Scholar, President's Undergraduate Research Award (PURA)

EXPERIENCE

Graduate Research Assistant ***August 2021 – Present***
Georgia Tech Smart Cities Civil Engineering Lab | *Atlanta, GA*
- Pre-process 3D pavement image data and train machine learning model to detect individually replaced concrete road slabs
- Build and train deep learning neural network to detect and classify road signs using Darknet YOLO and NVIDIA CUDA Toolkit
- Expand on Curve Sign Design project by streamlining data processing and webapp UI with Jupyter Notebook and JavaScript

Product Innovation Intern ***January 2020 – May 2020***
Elavon Inc. | *Atlanta, GA*
- Spearheaded front-end development of proof-of-concept cryptocurrency-backed point of sale vending machine using Ionic React
- Established Ethereum-backed blockchain cryptocurrency unique to Elavon with Metamask
- Utilized Microsoft Azure Computer Vision services to integrate object detection for various vendable goods from Elavon's API

PURA Undergraduate Researcher ***May 2019 – December 2019***
Georgia Tech Sonification Lab | *Atlanta, GA*
- Studied participants' abilities to locate sounds in Virtual Reality (VR) environments generated in Unity
- Generated resulting point-cloud heatmap of coordinates of participant-localized sounds with Unity and HTC Vive
- Collaborated with graduate researcher to extrapolate action-object congruency bias through studied trends

PROJECTS

KerasBlocks: Keras neural network integration with custom-made Blockly front-end UI using Python and JavaScript ***Summer 2021***
YOLO on GTSDB: Trained neural network on the GTSDB dataset with high reliability using Darknet YOLO and CuDNN ***Summer 2021***
Chest X-ray CV Detector: Utilized CV techniques on X-rays to detect chest conditions using Keras ***Fall 2020***
VonGo: Assembled a CV cryptocurrency-backed vending machine for Elavon using Metamask and Ionic React ***Summer 2020***

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, Dart, Kotlin, C#, HTML, XML, CSS, Sass, LC-3 Assembly, C, Blockly
Frameworks, Libraries, and Services: Azure, AWS, Google Cloud, SQL, Postgres, Django, Keras, Darknet, Scikit-learn, NumPy, Pandas
Hardware: NVIDIA CUDA Toolkit, miniSim Driving Simulator, HTC Vive, Anki Cozmo
Additional Skills: Git, Node, Docker, Conda, Bitnami, Gradle, CMAKE, Jupyter Notebook, Figma, Adobe CC, Adobe XD, Visual Studio

ADDITIONAL EXPERIENCE

Mobile Application Development Workshop Lead ***August 2021 – Present***
Healthcare Innovations | *Georgia Institute of Technology*
- Organize workshop content to instruct fundamental mobile application development concepts for pre-health university students
- Lead discussions and host coding exercises regarding common programming practices in Flutter and similar frameworks
- Direct attention and guidance to beginning programmers in erecting full-stack healthcare-related mobile application projects

Head Graduate Teaching Assistant ***January 2021 – August 2021***
Introduction to Cognitive Science (CS 3790 and CS 6795) | *Georgia Institute of Technology*
- Supervised two graduate teaching assistants and coordinated weekly meetings to discuss upcoming lectures and assignments
- Arranged reading material and course resources on metacognition for classes of 50 undergraduate and 36 graduate students
- Assessed students' performance through comprehensive class quizzes, breakout sessions, and individual and collaborative projects