

Abinavraj Ganesh Sudhakar

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University of Texas at Austin | Class of 2024

- B.S.: Computer Science, GPA: 4.00
- Relevant Coursework: Data Structures, Probability, Computer Architecture and Discrete Math.

Personal Projects

- FPGA RoboCop** 2021
- Built a robot car controlled by an Intel Cyclone FPGA with a custom pipelined CPU architecture with **Verilog** and a hex ISA created through an assembler in **Python** and custom **Assembly**.
- Robosuite Reinforcement Learning** 2020
- Used reinforcement learning algorithms (like DDPG, PPO, and TRPO) to train a robot to pick up a cube using **Tensorflow**, **Keras**, stable-baselines, and the **Mujoco** 3D Physics simulator for the UT Robot Perception Lab
- EdFusion** 2020
- Built a desktop app with **ElectronJS** and **Node** and a mobile responsive website with HTML, CSS, JS, **Express API**, and **MongoDB Atlas** to make an education system for anonymously clearing classroom confusion.
- Dokanda** 2020
- Built a video chat application for remote healthcare with real time translation for Indonesia using **ReactJS**, **SocketIO**, **Express**, **NodeJS**, **PostgreSQL**, and **WebRTC**.
- FakeUrGram** 2020
- Constructed a Generative Adversarial Network to draw art using **Tensorflow** and **Keras** for a **Flask API**.
- thecookingbot** 2020
- Built an IoT solution for safe cooking with **Firebase**, **Arduino**, and **ESP8266** connected to a **ReactNative** app.
- OTHS CMS Web** 2019
- Built a competition management system allowing for file submission, auto-grading, authentication system, and other functionalities for UIL Computer Science Competitions using **ReactJS**, **PHP**, **CSS**, **HTML**, **SQL**, and **Java**.

Work Experience

- Software Developer | Kreeda** Dec 2020 – Jan 2021
- Helping develop features for an e-commerce startup with website SEO, marketing, security, and UI.
- Research | University of Houston** Sept 2018 – Dec 2019
- Developed an app that collects and preprocesses accelerometer movement data for sleep analysis under Dr. Ioannis Kakadiaris using **ReactNative**, Google **Firebase**, and **AWS**.
- Software Engineering Intern | Hewlett Packard Enterprise** Jun 2018 – Aug 2018
- Constructed a user interface for the new iLO chip remote control and updated software for better customization and functionality using **Redux**, a RESTful API, and **ReactJS**.

Skills & Tools

Languages: HTML, CSS, JS/JQuery, Flutter, PHP, SQL, Python, ReactJS/Redux, ReactNative, ThreeJS, Java, NodeJS, MongoDB, ElectronJS, Flask, C, Verilog, Assembly

Tools: Firebase, AWS, DigitalOcean Droplet, Android Studio, Arduino, Raspberry Pi, GitHub/Gig Bash, Putty, Beautiful Soup, IBM Cloud, Bootstrap, Tensorflow, Keras, Wix, WordPress, MongoDB Atlas, WebRTC/SocketIO, Twitter API, Ubuntu Linux, Mujoco/OpenAI Gym, Quartus Prime

Awards & Honors

- **ModHacks 1st Place:** Won 1st place in the education track for a tech solution to student confusion.
- **Garuda Hacks:** Won top 12 out of 200+ submissions that aid Indonesia for the Wolfram Award.
- **HPE Special Recognition:** Recognized specially by CTO, Mark Potter, for my iLO GUI project presentation.
- **Robotics:** Competed at the global scale and utilized my vision processing and motion planning code.

Leadership & Organizations

Advancing UT Technology | Founder & President | Aug 2020 - Present

- Constructed a campus tech consulting club to bring a technological future to UT.

UT Sciences Toastmasters | Member at Large (Exec Team) | June 2020 - Present

- Following the Persuasive Influence pathway for professional persuasive speaking and presentation skills.