Akhil S. Kammila

akhilkammila@gatech.edu | (603)-930-1612 | US Citizen | akhilkammila.github.io

EDUCATION

Georgia Institute of Technology   **Atlanta, GA**
Bachelor of Science in Computer Science, Concentrations in Intelligence and People   *Expected Graduation, 2024*
Related Coursework: Data Structures and Algorithms, Object-Oriented Programming, Computing in Python, Statistics and Applications

EXPERIENCE

PeerPop | [Website Link](#)   **Atlanta, GA**
Incoming Mobile App Developer Intern   *September 2022 – Current*
- Will develop entire mobile application for an early-stage startup focused on data analytics in the entertainment industry
- In charge of designing data dashboards for event hosts and upcoming event displays for users
- Tech Stack: React Native, Firebase

SolutionHealth   **Virtual**
Data Analyst Intern   *June 2021 – August 2021*
- Optimized Solution Health's investments into medical equipment and advertising by analyzing data on patient demographics, facility leakage, and contributors to patient outmigration
- Developed a MATLAB graphical user interface to display trends in cardiovascular and oncology claims for 40+ health facilities
- Tech Stack: Python, MATLAB, Excel

Massachusetts Institute of Technology   **Cambridge, MA**
PRIMES Research Intern | [Paper Link](#)| [Presentation](#)   *January 2021 – January 2022*
- Constructed a formal protocol for the Tor handshake, a cryptographic protocol with over 2 million daily users, with information from capturing Tor network traffic and analyzing source code
- Developed an upgraded Tor handshake protocol, with improved censorship resistance, latency, and packet size, by changing certificate authentication and message ordering
- Tech Stack: Python, C, Wireshark

PRIMES STEP Research Intern | [Paper Link](#)   *September 2018 – July 2020*
- Solved subcases of a mathematics optimization problem involving the value verification of unknown coins
- Used Python and data visualization software to brute-force large amounts of test cases and detect trends
- Tech Stack: Python, Java, MATLAB, Mathematica

PROJECTS

safedrive | [GitHub Code](#) | Tensorflow, Flask, React, Firebase
- Used deep learning to create a distracted-driver detection algorithm based on movements including eating, talking, and removing a hand from the wheel
- Created a Raspberry Pi device with 3D-Printed casing that hooks onto a car's passenger-side handlebar
- The device captures a video feed of the driver and uploads frames to our Firebase database once connected to Wi-Fi
- Currently building a website for users to monitor their personal driver-distractedness data

ghost | [Demo & Tutorial](#) | [GitHub Code](#) | [Website](#) | React, Node.js, Socket.io, AWS Elastic Beanstalk
- Created the first implementation of the popular word game ghost – where players incrementally add letters to a dictionary word without saying the last letter
- Built a functional singleplayer mode by calling DataMuse API to validate word existence
- Designed easy, medium, and hard singleplayer bots by filtering dictionary words by the parity of their lengths
- Built a multiplayer mode with private rooms by using web sockets to transmit user input in real time
- Deployed the backend to AWS Elastic Beanstalk for live and scalable multiplayer functionality

Smart Camera | [Demo](#) | [Github Code](#) | React Native, Expo
- Created a mobile app which eliminates wasted phone storage from bad group pictures
- The app uses facial recognition software to detect the number of faces in the camera's frame
- A picture is only taken once every subject smiles, looks at the camera, and opens their eyes

ASL Learning Tool | [Demo](#) | [GitHub Code](#) | [Website](#) | Tensorflow, React, Flask
- Used self-collected images to train a machine learning model which translates sign language letters into English
- Developed a website to receive users' webcam feeds and translate their sign-language gestures in real-time
- Called translation APIs to add a separate website feature where users can translate text from any language into sign-language

Relevant Links: LinkedIn: [akhilkammila](#) | GitHub: [akhilkammila](#) | Personal Website (shows more projects): [akhilkammila.github.io](#)
Programming Languages: Python, Java, JavaScript, C++, HTML, CSS
Technologies: React.js, Node.js, Flask, scikit-learn, TensorFlow, React Native, MATLAB, Mathematica, Git
Honors: Selfiehacks (1st), Hackerland (3rd), Valedictorian, Coca-Cola Scholarship Semifinalist, Jae S. Lim Award in Mathematics, 1590 SAT