Ashish D'Souza

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EDUCATION

Georgia Institute of Technology | Atlanta, GA — May 2022

- Bachelor of Science in *Computer Science* — Major GPA: 4.0
- **Relevant Coursework**—OOP, Data Struct. & Algo., Discrete Math, Objects & Design, Linear Algebra, Multivariate Calculus
- **Threads**—Intelligence, Information Internetworks

EXPERIENCE

Optical Science Center for Applied Research | Dover, DE | *Software Engineering Intern* — Jun '17 - Jun '19

- Constructed an autonomous aerial greenhouse gas data collection module with Arduino
- Retrieved and analyzed satellite data with TensorFlow ML framework and Selenium

PROJECTS

COVID-19 Survival Calculator | https://github.com/computer-geek64/covid19-survival-calculator — Mar '20

- A web application that allows users with coronavirus to calculate the probability of their survival
- Programmed the back-end REST API and developed the user demographics database system. Also web scraped for and ran data analysis on live COVID-19 datasets, and helped devise the gradient boosting machine learning models.
- **Software:** Python, Django, Jinja, PostgreSQL, Pandas, XGBoost, LightGBM, Ruby, Nokogiri, JavaScript, HTML/CSS

ALRT (Automated Life Rescue Tracker) | https://github.com/computer-geek64/alrt — Feb '20

- ALRT is a multi-platform application that passively collects and stores location data to help first responders of natural disasters locate missing persons after conditions cause power/connection loss, while web scraping public databases for live disaster data.
- Developed the back-end API and managed a database cluster. Also designed the predictive location algorithm and web scraper.
- **Software:** Python, Flask, MongoDB, Selenium, TensorFlow, Firebase, JavaScript, React Native, ReactJS

KaliStorm | https://github.com/computer-geek64/kali-storm — Dec '18 - Present

- Created and maintained a personal server running Kali Linux ARM on a Raspberry Pi for secure file sharing, custom API access, remote code development, penetration testing, data encryption, media streaming, and gaming.
- **Software:** Python, Flask, Jinja, SQLite, Apache, Kali Linux, LUKS, HTML/CSS, JavaScript, MySQL, PHP

MileSnap | *PDI Winning Project at HackGT* | https://devpost.com/software/hackgt6-g74o8p — Oct '19

- A cross-platform app that allows users to take a picture of a gas station sign and receive fuel type and price
- Devised an image post-processing spatial algorithm to extract fuel data, and an image pre-processing bilateral blur algorithm
- Implemented the back-end API that leveraged a variety of cloud services
- **Software:** Python, Flask, OpenCV, AWS S3 Bucket, Google Cloud OCR, Azure Computer Vision, JavaScript, React Native

Deep Learning for Tropospheric Ozone Prediction | https://github.com/computer-geek64/MTD — Oct '18 - Dec '18

- Software application that uses deep learning to predict harmful tropospheric ozone levels in local areas
- Trained a Deep Neural Network with Adagrad optimizer and Leaky ReLU, also used k-NN for outlier detection
- Designed front-end desktop application GUI and leveraged government air quality database with Socrata Open Data API and SQL
- **Software:** Java, Python, TensorFlow, TensorBoard, SODA, NumPy, Swing

AWARDS

- HackGT 6 Hackathon - *PDI Award for MileSnap Project* (2019)
- SkillsUSA Computer Programming - *National Gold Medalist* (2018), *4x State Gold Medalist* (2015-19)
- Regional Multi-state Science Fair - *First Place* (2018), *Third Place* (2017)
- President's Volunteer Service Award (2017) - *100 hours of service within 1 year*

SKILLS

- **Programming Languages:** Java, Python, Ruby, Bash, SQL, JavaScript, HTML/CSS, PHP, R
- **Frameworks:** Django, Flask, Jinja, TensorFlow, Pandas, Rails, Selenium, SocketIO, OpenCV, Nokogiri, Java FX & Swing
- **Software:** LAMP, Android Studio, Arduino, Git, LUKS, AWS S3, Google Cloud OCR, Azure Computer Vision
- **Databases:** PostgreSQL, MySQL, MongoDB, SQLite, MariaDB, JSON
- **Operating Systems:** Linux (Arch, Fedora, Debian, Kali, Qubes OS, Raspbian, Ubuntu), Windows, OS X