SAKSHAM ARORA

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EDUCATION

Dartmouth College, Hanover, NH   *Expected Graduation: 2023*
A.B Candidate in Computer Science, Mathematics   **GPA**: 3.81/4.00
Relevant Coursework: Intro to Computer Science, Problem Solving & Object Oriented Programming, Linear Algebra (Honors), Smartphone Programming, Discrete Mathematics, Probability (Honors), Differential Equations

EXPERIENCE

Institute of Security, Technology & Society, Dartmouth College   September 2020 - Present
Research Assistant for Professor V.S. Subrahmanian   *Hanover, NH*
- Generating synthetic android malware by designing and implementing transformations using industry-standard obfuscation techniques, and genetic programming techniques to evade anti-virus softwares.

Development Data Lab   October 2020 - Present
Research Assistant for Professor Paul Novosad   *Hanover, NH*
- Developing interactive visualizations of DDL research projects using D3 documents for the DDL website.
- Using satellite image data for urban slum detection, pit mine detection & village/town income estimation to inform economic policy decisions using neural networks and computer vision techniques.

StarKisan, direct-from-farm Fresh Produce Supply Platform   June 2020 - August 2020
Android Developer & Data Science Intern   *Delhi, India*
- Developed & deployed Android platform for fruit, veg price collection using Firebase Authentication, Firebase Cloud Firestore for backend
- Trained ARIMA & SARIMA models for timeseries forecasting on fruit, veg prices; scraped over 10000 data points from government data websites using requests, selenium & beautifulsoup libraries in python.

Young India Foundation   April 2019 - September 2019
Head of Research & Data   *Delhi, India*
- Developed a research framework for YIF Think Tank projects; led a team of 8 interns to work on the 2019 Lok Sabha Elections project
- Used NumPy, Keras, Sci-Kit libraries in Python to clean, organise and derive insights like from Lok Sabha 2019 elections Election data; trained a classification model to derive insights on the electability of candidates across India based on age, gender,SC-ST-OBC status, attempting to answer the question, 'Do voters consider age as a factor while evaluating candidates running in their constituency?'

Department of Computer Science, Dartmouth College   January 2021 - Present
Teaching Assistant   *Hanover, NH*
- Graded assignments, midterm and final papers for the Introductory Computer Science course at Dartmouth.
- Led weekly review session for 10 students to review key CS concepts such as coding etiquette, data structures, objects classes, recursion.
- Held 5 hours of office hours every week to assist students with understanding and applying concepts, working on lab assignments and preparing for exams.

ACTIVITIES & LEADERSHIP

Lab Member, Dartmouth Security and AI Lab (DSAIL)   2020 - Present
Dartmouth College   *Hanover, NH*
- One of only two undergraduate lab members working on the AI and cybersecurity project under Prof. V.S. Subrahmanian.

Vice President & Academic Co-Chair, South Asian Students' Association   2020 - Present
Dartmouth College   *Hanover, NH*
- Conducted and publicized events relating to the South Asian community on campus; invited speakers to give talks and hosted debates between speakers, students & faculty on topics relating to the subcontinent

Designer & Web Developer, HackDartmouth   2020 - Present
- Created the design strategy for HackDartmouth VI including promotional material, merchandise, primary logo and the sponsorship prospectus; assisted in designing the HackDartmouth website

SKILLS

Programming   Java (1000+ lines), Python (1,000+ lines), C++, HTML, Git, JavaScript, SQL
Data Analysis   LaTeX, MS Excel, modelling, machine learning, visualization, web scraping