ABHINAV GANESH

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EDUCATION

The University of Texas at Austin, Austin, TX — May 2025
Bachelor of Science, Computer Science
GPA: 3.9351
Relevant Coursework: *Data Structures; Discrete Math; Computer Organization and Architecture; Matrices/Matrix Calculations; Probability; Operating Systems; Stochastic Processes; Intro to Statistics and Data Science;*
Current: *Algorithms and Complexity; Principles of ML;, Applied Statistics; Differential Equations with Linear Algebra; Essentials of AI*

National University of Singapore - Semester Exchange — Jan 2023 - May 2023
Relevant Coursework: *Information Retrieval; Simulation, Intro to Quantitative Finance, Sonic Circuits*

SKILLS

Technical/Computer Skills: *Advanced Java, Python; Intermediate Javascript, R, Data Science; Basic HTML/CSS*
Languages: *Intermediate Spanish, Basic Tamil*

EXPERIENCE

Seton Stroke Institute/Department of Neurology, Austin, Texas (*Undergraduate Research Assistant*) — January 2022 - Present
- *Python, R, pybids, nilearn, ANTs, OpenCV, Docker, multiprocessing*
- Work with clinical trial data regarding stroke patients to develop CT image processing pipeline

Esri, Redlands, California (*Software Development Intern*) — May 2023 - Aug 2023
- *ArcGIS Maps SDK for JavaScript, ArcGIS Python API, TypeScript, StencilJS, Python, LangChain, Chroma, FAISS, OpenAI API, LLaMA, HuggingFace*
- Individual R&D to explore use of LLM applications to current products; created demo projects and presented findings to team

Hutter Research Group, Austin, Texas (*Undergraduate Research Assistant*) — August 2021 - August 2023
- *Python, Scikit-learn, Seaborn, Pandas, NumPy*
- Perform data analysis and build visualization tools to display gas data to aid analysis of differentiating properties of gas ionization as part of an effort to create a more portable technology to detect gas information.

UnitedHealth Group/Optum, Remote (*Intern - Data Engineer Team*) — June 2022 - August 2022
- *Full-stack development (Java, Spring, HTML/CSS/JavaScript), SQL*
- Worked in team of four to develop internal tool used to compare databases. Took lead on webpage creation and Spring Boot API.

Texas Convergent, Austin, Texas (*Incubator Engineer*) — August 2021 - December 2021
- *Angular, Azure, TypeScript, CSS/HTML/JavaScript*
- Worked with the startup Root Medical Translation to create an audio capture UI for a webapp for translation

Data Inspired Young Analysts, Remote (*Student Mentor*) — June 2021 - July 2021
- Led sessions, monitored students' progress, and answered questions related to Python programming, the Scikit-learn library, and fundamentals of Data Science as part of DIYA's Summer 2021 Data Science Bootcamp.
- Skills used: *Python, Scikit-learn, Seaborn, Pandas, NumPy*

PROJECTS

CurbCut: A Mobile Application for Accessibility-Focused Routing — July 2023
- *Kotlin, Flask, ArcGIS Maps SDK for Kotlin, PRAW, OpenAI API*
- Android application to provide accessible routes based on user preferences to avoid barriers to accessibility, along with some social media and chat interface functionality for help. Finalist team (top 8) in Esri intern Hackathon.

Sentiment Analysis to Compare Characters across Translations of Homer's *Odyssey* — Nov - Dec 2022
- *R, Tidyverse ggplot, Python, Pandas, TextBlob, NLTK*
- Assessed relationship between character descriptions and their demographics across various translations of the *Odyssey*

StudySmart: A Tool to Extract Targeted Questions from Released AP Exams: — August 2020 - May 2021
- *Python, Google Sheets API, Tesseract OCR, Natural Language Processing, Scikit-learn, RegEx, Pandas, Tkinter, PandasTable*
- Under mentorship of Professor Suma Bhat from the University of Illinois at Urbana-Champaign, designed and created downloadable executable application that utilizes Natural Language Processing to categorize questions from previously released AP Exams into units to help students focus on targeting specific areas to improve their scores

LEADERSHIP & COMMUNITY INVOLVEMENT

UT Austin TIDES - Science Sprint, Austin, Texas — March 2021
- Analyzed campus vehicle usage data to determine the scope of their greenhouse gas emissions and determine more efficient routing methods for campus vehicles. Presented findings to university staff to be incorporated into department policy.

UT Austin Science Olympiad, Austin, Texas — September 2021 - Present
Event Coordinator, Event Supervisor
- Wrote, proctored, and graded Science Olympiad exam for middle and high school divisions for UT Science Olympiad Invitational

Certificates & Awards

- CITI Certifications - Biomedical Researchers (February 2022), GCP For Investigational Drugs and Medical Devices (March 2022)
- CAS Case Study Competition - Honorable Mention (Spring 2022)

REMOVED:

The Impact of Income and Government Expenditure on Education on the Life Expectancy of Countries November 2022

- *R, Tidyverse, ggplot*
- Obtained and merged data from the WHO and World Bank to perform visual and statistical analysis related to the relationship(s) between GDP, % GDP spent on education, gender, and population size across countries over time.

Data Inspired Young Analysts *(Python, Pandas, Scikit-learn)* June 2021 - July 2021

- Predicted funding approval for school projects using data from DonorsChoose using data science and machine learning techniques and presented findings to a group of industry experts.

Magnet Man Game *(Java, Swing Library, Threads)* February 2019 - April 2019

- Created multiplayer GUI game with horizontal side scrolling where players must avoid stationary and moving obstacles including tracking missiles, teleports, and power ups.

AiGo Learning September 2021 - January 2021

Instructor

- Teach Scratch programming to a group of children around 7-9 years old and provide personalized help before and after class. Also acted as a judge in both preliminary and final rounds of hackathon; evaluated projects and asked questions of competing teams.

Approved Vendors Search *(HTML/JavaScript/CSS)* January 2020 - March 2020

- Created webpage that allows users to search through a list of online stores of school-approved vendors to display the cheapest relevant results to best optimize the use of school funds.