ABHINAV GANESH

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EDUCATION

The University of Texas at Austin, Austin, TX
May 2025
Bachelor of Science, Double Major: Computer Science and Mathematics
GPA: 3.9351

National University of Singapore - Semester Exchange
Jan 2023 - May 2023

SKILLS

Technical/Computer Skills: *Advanced Java, Python; Intermediate C, Javascript, TypeScript, 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. Implemented customized ML techniques to process low resolution image data. Contribute to open source image processing libraries (ANTs, CT BET). Perform trial work with new softwares.

Quantitative Criticism Lab, Austin, Texas (*Undergraduate Research Assistant*)
December 2023 - Present
- *Python, Tensorflow, BERT*
- Implement context-based quote retrieval model for novel Latin corpus designed by interdisciplinary research team

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*
- Performed data analysis and built visualization tools to display gas data to aid analysis of gas ionization characteristics to aid graduate student with design of portable gas sensor

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

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, March 2022
- *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 web 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

NUS Arts Festival 2023 - *Light Years, Week Days*, Singapore, Singapore
January - May 2023
- Collaborated with interfaculty team and professors to design and create wind chimes and capacitive touch keyboards using arduino. Presented as part of interactive art installation outside NUS' YST Conservatory of Music.

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.

Certificates & Awards

- College of Natural Sciences University Honor Roll
- CITI Certifications - Biomedical Researchers (February 2022), GCP For Investigational Drugs and Medical Devices (March 2022)
- CAS Case Study Competition - Honorable Mention (Spring 2022)