Sanika Nandpure

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EDUCATION

The University of Texas at Austin, Austin, TX   May 2027
Bachelor of Science, Computer Science (GPA 3.70)

   Relevant Coursework: Operating Systems, Computer Architecture, Data Structures (**Java**), Linear Algebra, Statistics and Probability, Discrete Mathematics, Differential, Integral, and Multivariable Calculus

TECHNICAL SKILLS & CERTIFICATES

Languages/Technologies:
- Software Engineering/Full-stack development: MongoDB, Express, React, Node js (MERN), Java, Javascript, C/C++
- Machine Learning and Computer Vision: Python, TensorFlow, PyTorch, Pandas, Numpy, OpenCV, SQL
- General: Git, Github

EXPERIENCE

Research Fellow, Machine Learning and Computer Vision   Jan 2024 - Present
University of Texas at Austin, Freshman Research Initiative, Geometry of Space
- Developing deep neural network architectures for the deconvolution of astronomical images (**Python**, **TensorFlow**, **Numpy/Pandas**, **SQL**)
- Working with large datasets from SDSS and other sources to map out and understand the large-scale structure of the universe

Machine Learning Engineer   Jan 2024 - Present
UT Robot Automation Society, IGVC Team
- Implementing complex Computer Vision models for lane and obstacle detection
- Working with **Python** and **OpenCV**

Software Engineering Intern   Sept 2023 - Dec 2023
Tunebat Marketplace (previously Scraps Audio)
- Developed user interfaces on landing and product pages with **Shopify CLI, Javascript, and Shopify Liquid**, improving the user experience for more than **1k** users on the site
- Implemented key features such as profile pictures on artist, seller, and product cards to give customers greater transparency about where they are purchasing from
- Implemented bug fixes on business-side product dashboard, improving the selling experience for **400+** major artists, producers, and scrapped audio sellers on the platform

Executive Director, Programming and Math Instructor   Aug 2021 - Sept 2023
YoungBytes
- Over the span of 2 years, expanded YoungBytes from a Texas-based organization to a multinational one spanning **4 countries** (UK, US, Canada, India); increased nonprofit reach by **30%**
- Taught **Java**, **Javascript**, **Scratch**, and Algebra/Geometry to **50+ students** from 4+ different countries.
- Developed curriculum for and taught YoungBytes' first-ever summer coding bootcamp
- Developed a free, on-demand programming crash course for students around the world

PROJECTS

CPU System Emulator   May 2024
(CS429, Computer Architecture final project)
- Built an independent ARM instruction processor in **C** that used a pipelining approach with a two-level memory hierarchy to simulate the role of the CPU.
- Custom implementation of cache hits and misses, hazards, stalling, and squashing

Treatsi (https://github.com/krisub/wics_hacks_24)   Jan 2024
- Led a team of 4 engineers to build Treatsi, a full-stack web app empowering minority-owned small businesses to expand their customer audience by incentivizing users to explore and enjoy new local restaurants through a gamified experience
- Developed using technologies including **React Native**, **SQLite**, and **Flask**
- Awarded **Best Novice Hack** out of 210 participants at the Women in Computer Science Annual Hackathon

UT SafeTrade | Texas Convergent (https://github.com/maehekbhatt/f23_fintech_transactions)   Sept 2023 - Dec 2023
Full Stack Developer
- Collaborated with team of product, design, and tech members over the course of a semester to create UT SafeTrade, a full-stack marketplace platform for UT students ensuring end-to-end safe P2P transactions
- Implemented frontend interface with **React Native**; backend with **Firebase** and **Flask**
- Won **Best Tech Award** at Convergent Demo Day