SARTHAK NEGI

210-935-6275 | srnegi141@gmail.com | LinkedIn | GitHub | Portfolio

EDUCATION

The University of Texas at San Antonio   Aug. 2021 – December 2024
Bachelor of Science in Computer Science (conc. in Software Engineering and Data Science)   *GPA: 3.86 (Major: 3.97)*

- Awards - Distinguished Presidential Scholarship, President's List, Honor Roll
- Relevant coursework - Data Structures, Systems Programming, Analysis of Algorithms, Application Programming, Data Science, AI, Computer Organization, Database Systems, Software Engineering, Secure Software Dev

EXPERIENCE

Research Software Developer II   January 2025 – present
The Data Analytics Center, UTSA   *San Antonio, TX*

- Designed and shipped a modular AI chat UI for Langflow-based agents, improving prompt complexity handling by 2x
- Architected PostgreSQL & MSSQL schemas supporting one-click flow deployments for internal users
- Integrated vector databases (Qdrant, ChromaDB) to enable retrieval-augmented generation (RAG) in production pipelines
- Developed a role- and group-based access control system for fine-grained resource permissions
- Led interviews for 15+ graduate hires; mentored new contributors across backend and DevOps

Undergrad Researcher   March 2023 – December 2024
The Data Analytics Center, UTSA   *San Antonio, TX*

- Published internal Python package with 50+ unit tests (100% coverage), boosting dev productivity 50%
- Cut query/analysis time by 75% with CUDA-based parallel data processing queue
- Created an LDAP microservice to centralize user data across internal services, improving authentication and user management
- Co-developed full-stack analytics dashboard using React, FastAPI, and PostgreSQL
- Built 12+ robust scrapers/parsers for ingesting research data across 5+ sources

PROJECTS

PixelPulse | *Python, React, AWS RDS, AWS S3, FastAPI, PostgresQL*   May 2024

- Built PC-parts storefront with secure JWT+OAuth APIs, order tracking, and admin dashboard
- Deployed modular backend (FastAPI + SQLAlchemy) with AWS S3/RDS
- Architected RBAC system and responsive frontend with custom React components
- Followed Agile SCRUM, managing sprints in Trello and planning architecture collaboratively in Excalidraw

Guardian Wheels | *Python, Javascript, AWS, FastAPI, Arduino, MySQL, Twilio*   November 2023

- Connected sensor-equipped Arduino with real-time alerting via Twilio SMS
- Deployed drone-activated motion tracking system triggered via AI-powered analysis
- Built REST API orchestrating hardware and frontend; stored logs on AWS S3/MySQL

Commentalyzer | *Python, Youtube API, OpenAI API, JavaScript, HTML/CSS*   April 2023 - Present

- Analyzed YouTube comments using ChatGPT for engagement & content strategy insights
- Aids content creators with data-driven insights to optimize content strategy and boost monetization
- Enhances audience engagement through data-backed decision making

BeRowdy | *Java, Android Studio, Google Firebase*   May 2023

- Developed "BeRowdy" app for UTSA students, enabling account creation, campus connections, and photo sharing
- Utilized Object-Oriented Programming principles and meticulously followed the MVC architecture
- Integrated Firebase for backend and user authentication, ensuring seamless functionality

TECHNICAL SKILLS

Languages: Python, Java, C, SQL (Postgres, MySQL, Microsoft SQL, MongoDB), JavaScript, TypeScript, HTML/CSS, GraphQL
Frameworks: React, Node.js, Flask, FastAPI, Express.js
Developer Tools: AWS, Docker,Azure, Git, VS Code, CUDA, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: Pandas, NumPy, Matplotlib, PyTorch, TensorFlow, BeautifulSoup, Pytest, Selenium

EXTRACURRICULARS

Organizer   2024
RowdyHacks   *San Antonio, TX*

- Part of the organizing team of RowdyHacks 9, hosted by ACM UTSA
- Working with the Tech Team to develop the Hacker Portal, ensuring a seamless and engaging user experience