

Aditya Dhanraj

(469) 988 - 8567 | adityadhanraj@utexas.edu | <https://adhanraj06.github.io/> | Austin, TX

EDUCATION

University of Texas at Austin

Bachelor of Science in Computer Science

Austin, TX

May 2028

- SAT: 1580 | Walnut Grove High School's Inaugural Salutatorian (4.0 GPA)
- UFA (Investment Associate), UTexas Energy (Commodities Prep Member), ML & Data Science, UTPC, ACM, ABSA
- Data Structures, Software Engineering, Computer Architecture, Operating Systems, Cloud Computing, LinAlg

2025 INVITE-ONLY EARLY TALENT & INSIGHT PROGRAMS

- **Citadel** – The Fixed Income & Macro Challenge (NY)
- **UBS** – Tomorrow's Talent Equity Research Insights Day (NY)
- **Walmart** – Spring Sophomore Summit: SWE II Intern (AR)
- **ServiceNow** – Discover Program – Engineering (CA)

EXPERIENCE

Founding Engineer

July 2025 – Present

Xsauce Inc. — Node.js, TypeScript, Python, AWS, Docker, Redis, DynamoDB, Express, Prometheus

Remote

- Leading backend development and infrastructure for Wage, a pre-launch gaming platform expanding market access for younger generations, including REST API design, microservice and pipeline management, and core product features

Undergraduate Research Assistant

Jan. 2025 – July 2025

UT Austin — Python, Statistical Modeling, NumPy, Pandas, Time-Series, Bloomberg Terminal

Austin, TX

- Analyzed daily time-series data for over 80 indices, developed a VIX Term Structure, and built a commodities forecasting model in Python to forecast price movements and model market volatility alongside Dr. Travis Johnson

Executive Board Member

July 2023 – Aug. 2024

Computer Science Youth of America — Python, Event Coordination, Public Relations

Remote

- Supplied free Computer Science education to over 950 students, helped build a research program, coordinated hackathons with hundreds of participants, and raised over \$285,000 in sponsorships

Computational Fluid Dynamics Researcher

June 2023 – Oct. 2023

University of North Texas (UNT) — ANSYS Fluent, AutoCAD, Finite Element Analysis

Denton, TX

- Leveraged ANSYS Fluent software to model 3D geometries, simulate fluid flow scenarios, and analyze multiphysics phenomena (e.g., pressure distributions, heat transfer, turbulence) alongside Dr. Hamid Sadat of UNT

PROJECTS

ConnectAI — Python, FastAPI, NLP, Docker, Next.js, TypeScript, Tailwind CSS

Oct. 2025

- Developed a full-stack AI cold outreach platform, featuring asynchronous FastAPI microservices and REST endpoints for NLP-driven profile parsing, company discovery, personalized message generation, and intelligent relevance scoring

RaceNebula — Python, Flask, Pandas, NumPy, SKLearn, FastF1, React

Oct. 2025

- Architected a modular data pipeline and a Flask REST API powering real-time F1 telemetry (20+ drivers, 500+ data fields/sec) with endpoints for analytics, ML predictions, and Digital Twin simulations
- Constructed a Random Forest model (15 engineering features) for pit-stop prediction, achieving $\tilde{0.8}$ ROC AUC accuracy and developed a Digital Twin modeling tire wear, fuel load, and engine heat to test race strategies

Dynamic Memory Allocator — C, Memory Management, Systems Programming, Bitwise Ops, GDB

Feb. 2025

- Implemented a malloc/free-style allocator from scratch with 16-byte alignment, explicit free lists, binning, bitwise metadata, block coalescing/splitting, and heap design for efficient low-level memory management
- Achieved 100% correctness across 24 traces and averaged 70% memory utilization and 1900 ops/sec throughput

SKILLS & INTERESTS

Programming: Python, Java, C, HTML/CSS/JS, Node.js, AWS, DynamoDB, Linux, Docker, Git, GDB, Mathematica

Data Science: Machine Learning, NumPy, Pandas, SKLearn, TensorFlow, PySpark, Hadoop, NLP, NLTK, BeautifulSoup

Mathematics: Time-Series Analysis, Statistical Modeling, Probability & Statistics, Linear Algebra, Stochastic Processes

Other: Spanish, Hindi, Piano (15 Years, 5× National Winner), Football (15 Years), Poker, Chess, ANSYS, AutoCAD