

Arjun Agravat

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EDUCATION

University of Texas at Dallas

B.S. Computer Engineering

Richardson, TX

Aug. 2023 – June 2026

Achievements: Erik Jonsson School of Engineering and Computer Science Endowed Scholarship; Dean's List (2023)

GPA: 3.94/4.0

Relevant Coursework: Linear Algebra; Calculus II; Calculus III; Discrete Math I; Computer Science II; Data Structures and Algorithms; Probability Theory and Statistics; Digital Circuits; Digital Logic and Computer Design

TECHNICAL SKILLS AND CERTIFICATIONS

- **Programming Languages:** Python, Java, C++, Swift, SQL, Verilog, MATLAB, R
- **Frameworks and Libraries:** TensorFlow, PyTorch, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn, React, Django, ARKit, RealityKit, MapKit
- **Tools:** Git/GitHub, Solidworks, Arduino/ArduinoIDE, Office365, Xcode, RStudio, IntelliJ, Visual Studio Code
- **Certifications:** Unsupervised Learning; Recommenders; Reinforcement Learning (DeepLearning.AI, 2025), Advanced Learning Algorithms (DeepLearning.AI, 2025), Supervised Machine Learning: Regression and Classification (DeepLearning.AI, 2025), Recommender Systems with Google Cloud (Google, 2025), Natural Language Processing with Google Cloud (Google, 2025), Computer Vision Fundamentals with Google Cloud (Google, 2025), Production Learning Systems (Google, 2025)

EXPERIENCE

IEEE UTD - Computational Intelligence (CI)

Richardson, TX

Computational Intelligence Officer

Jan. 2025 – Present

- Plan and manage events with corporate partners on computational intelligence and machine learning topics
- Design workshops to enhance members' technical skills in AI, data science, and programming
- Lead hands-on projects focused on solving real-world problems using computational intelligence techniques
- Collaborate with organizations to host joint events and expand professional networks

Dallas Formula Racing/Formula Society of Automotive Engineers (DFR/FSAE)

Richardson, TX

Powertrain Subteam Member

Aug. 2023 – Oct. 2023

- Ensured precise measurements of fuel pressure regulators using dial calipers
- Designed and submitted a detailed 3D model of a fuel pressure regulator on **Solidworks** for the racing competition

ACTIVITIES & PROJECTS

Dallas Formula Racing/Formula Society of Automotive Engineers (DFR/FSAE)

Richardson, TX

Powertrain Subteam Member - Intake

May 2024 – Mar. 2025

- Designed an intake manifold for the 2025 DFR competition vehicle, improving AFR distribution, MAP sensor mounting, and reducing weight
- Worked in an **AGILE team**, iterating designs based on flow simulations, research, and collected data, with weekly presentations
- Led plenum design and MAP sensor placement, utilizing **Solidworks** for CAD modeling and performance analysis
- Secured full sponsorship, eliminating costs, and **reduced weight by 64%** (8 lbs to 2.89)

HackUTD Ripple Effect

Richardson, TX

FrontIER

Nov. 2024 – Nov. 2024

- Developed a iOS app in Xcode using **Swift**, incorporating a custom Neural Collaborative Filtering model to predict personalized product recommendations(**AUC-ROC: 91%, F1-Score: 80%**)
- Engineered customer-product embeddings with **TensorFlow** and **Scikit-learn**, achieving **82% precision** from Frontier Communications' datasets
- Integrated real-time augmented reality (AR) product visualization using Apple's **ARKit** and **Reality Kit**
- Designed a support chatbot using **Samba Nova Cloud API** to enhance user engagement and provide real-time support

HackFin Quantum Drift - 3rd Place

Richardson, TX

TerraTrust

Nov. 2024 – Nov. 2024

- Developed an iOS app in **Swift**, utilizing **MapKit**, allowing users to analyze location-specific risk scores
- Designed and implemented a fully connected feedforward neural network in **Python** using **Pytorch**, **Scikit-learn**, and **Pandas**, to predict land viability risk scores (0-100) using environmental, crime, and economic factors(**MAE: 0.03, RMSE: 0.03, R^2 : 1.0**)

HackUTA 6

Arlington, TX

MindMosaic

Oct. 2024 – Oct. 2024

- Developed an iOS app in Xcode using **Swift**, utilizing **Firebase** for authentication, and an integrated API for sudoku activity
- Featured journaling, drawing prompts, and three games (Sudoku, Anagrams, Flashcard Match) to enhance critical thinking, memory recall, and motor skills, with research based activities and colors proved to enhance brain stimulation

Self-Directed Project: Predicting Calories from Exercise

Houston, TX

Self-Learning

May. 2024 – June 2024

- Developed a machine learning model in **Python** using **Pandas**, **Numpy**, and **Scikit-Learn** to predict calories burned from exercise data
- Implemented visualization techniques using **Matplotlib** and **Seaborn** to analyze and present model outcomes
- Achieved a **Mean Squared Error (MSE) of 0.001** with an **r^2 score of 0.98**