ADVAY BHATTACHARYA

Permanent Address: Flower Mound, TX, USA

advayabhattacharya@gmail.com
Cell: (214)-972-8022
LinkedIn | GitHub

EDUCATION

Texas A&M University, College Station, TX **Aug. 2023 - May 2027**
Bachelor of Science in Statistics
GPA: 3.89 – *Dean's Honor Roll*

WORK EXPERIENCE

Analytics Intern – UnitedHealth Group **Jun. 2025 – Aug 2025**

- Deployed Power BI dashboard analyzing 5M+ accounts / $39.6B revenue, consolidating 170+ sources; uncovered 98% year-over-year growth in high-value customers
- Automated workflows in SQL + Power Query, transforming 300K records into exec-ready reports, eliminating manual processes
- Identified critical revenue cycle discrepancies through systematic data analysis, uncovering 3,200+ accounts ($160M+) erroneously assigned to third-party vendor, enabling recovery of misallocated claims
- Analyzed denial patterns across $600M in healthcare claims, identifying Pro Fees as top denial category (18K+ denials) and Inpatient as highest dollar impact ($81M+ denied)

Undergraduate Research in ML and Predicting Change Orders – Dr. Ashrant Aryal **Aug. 2024 –Jan. 2025**

- Employed random forest models to predict change orders in 10,000+ TxDOT construction projects
- Optimized a case-based reasoning algorithm using a custom accuracy metric for predicting change orders
- Leveraged SQLite databases to extract critical project data for predictive modeling

Undergraduate Research in Game-Based Learning – Dr. Michael Rugh **Sep. 2023 – May 2024**

- Analyzed survey data (100+ participants) to identify factors influencing game-based learning
- Co-authored 3 publications recommending strategies to integrate game-based learning in classrooms
- Ran student camps to evaluate game-based learning; testing showed 2× improvement in scores after instruction

PROJECTS

TAMUHack 2025 – 2nd Place **Jan. 2025**

- Developed Coinvo, an AI-powered financial advising platform, integrating OpenAI's chatbot and real-time stock trading APIs to enhance user financial management
- Secured 2nd place out of 536 participants for an innovative approach to promoting smart financial behavior
- Developed full-stack solution (Flask, Fast API, JS), integrating AI + trading APIs under 36-hr time constraint

Student Engineering Council Survey Analysis – Python **Oct. 2023 – Dec. 2023**

- Revealed trends in career fair surveys across three years of data
- Leveraged the BERT model to extract sentiments across datasets
- Harnessed gradient boosting and KNN to predict student rating (AUC = 0.86)

General Motors EV Project – Python **Feb. 2024 – Apr. 2024**

- Collaborated with General Motors to reveal trends in EV use through binary classification
- Machine Learning: Employed random forest to predict EV use with 95% accuracy and F1-score of 0.87
- Engineered hybrid vehicle data and created weights to balance urban-rail data

RELEVANT SKILLS

- Programming: Python, SQL, R, C++, JavaScript
- Data Science/ML: Scikit-Learn, Pandas, NumPy, BERT, Random Forest, Gradient Boosting, NLP
- Tools: Power BI, Excel, Git, Jupyter, STATA, Power Query, Flask, Fast API

LEADERSHIP

TAMU Mock Trial Team **Sep. 2023 –Present**

- Excelled in weekly competitions as lawyers in real courtrooms, demonstrating public speaking, legal research, and argumentation skills
- Was one of 23 chosen from a competitive pool of 100 applicants through audition and interview
- Mentored group of 5 peers as co-captain; 3 went on to win awards at consecutive tournaments for the first time