

Kushagra Tandon

www.linkedin.com/in/k-tdon | https://kushagrandon.netlify.app | ktandon4@asu.edu | (602) 919-8742

EDUCATION

Bachelor of Science in Computer Science

Arizona State University

May 2026

Tempe, Arizona

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Distributed Software Development, Computer Network Security, Human-Computer Interaction, Applied Linear Algebra, Probability & Statistics

SKILLS

Languages: Python, C/C++, Java, JavaScript, SQL, Rust

Machine Learning & Data: TensorFlow, XGBoost, Scikit-learn, Pandas, NumPy, NLP, Time-Series Analysis, Model Evaluation & Backtesting

Web & Application Development: React.js, Flask, Django, Node.js, TypeScript, REST APIs, SwiftUI

Databases & Cloud: MongoDB, MySQL, AWS, Firebase

Tools & Systems: Git, Linux, CI/CD, Docker, OpenCV, Agile/Scrum

PROJECTS

Peer-to-Peer Rental App | *SwiftUI, Firebase, MVVM*

- Built a mobile app enabling users to list, book, and manage rental equipment using **Firebase (Auth, Firestore, Storage)**.
- Designed scalable **MVVM** architecture with reactive UI via **@StateObject**, **@ObservedObject**, and **@Published**.
- Integrated **real-time** booking, chat, and listing features with Firestore-backed data synchronization.

Sentiment Analysis Bot (News-driven financial signal generation and return forecasting) | *Python, TensorFlow, NLP, Scikit-learn*

- Achieved **~19% annualized** return in backtests by building a **news-driven financial forecasting and trading strategy**
- **Reduced latency ~35 %** with a multi-source RSS pipeline fetching **1K+ headlines/day**.
- **Improved signal accuracy ~25 %** using TextBlob sentiment scoring and rolling-window smoothing.
- **Produced full performance metrics in <2 s/test** via a vectorized Pandas/NumPy backtesting engine.

Credit Risk Prediction (Credit risk modeling for financial decision-making) | *Python, Scikit-learn, React, Flask*

- Developed a web app that predicts **customer credit risk to support financial risk assessment** using a Random Forest classifier
- Designed a clean **Flask + React** stack for live model inference and result visualization.
- Set up CI/CD pipelines for smooth deployment and high availability on GitHub Pages and Render.

PDF to Lecture | *Python, NLP, Flask, React.js*

- Built a tool to convert PDFs into audio lectures **using NLP for text extraction and synthesis**.
- **Automated a 6-step manual process** to reduce content creation time and effort.
- Integrated real-time feedback via **React frontend** for a better user experience.
- **Handled large files (up to 500MB)** efficiently for broader usability.

EPL Betting Model — Model vs Market Analysis | *Python, XGBoost, Scikit-learn, Pandas, Streamlit*

- Built a **calibrated XGBoost model** for EPL outcomes, achieving **ROC-AUC \approx 0.79** on **570 out-of-sample matches**.
- Compared **model vs bookmaker-implied probabilities** using odds-derived features and **ELO ratings to identify market edges**.
- Backtested **fixed-stake and Kelly strategies** across **100+ candidate bets**, analyzing ROI and drawdowns.
- Deployed an **interactive Streamlit dashboard** to explore predictions, edges, and bankroll simulations.

EXPERIENCE

Research Aide

ASU School Of Earth & Space Exploration

October 2023 - May 2025

Tempe, Arizona

- Developing **virtual field experience modules** for the NSF-funded **WORM Portal project**, enhancing **user engagement**.
- Collaborating with **Dr. Reano and an interdisciplinary team** to ensure **scientific accuracy** and **cultural relevance** in immersive learning experiences.
- Integrating **Indigenous knowledge frameworks** into educational content to create **inclusive and impactful materials**.

Software Development Intern

Hindustan Aeronautics Limited

June 2023 - August 2023

India

- **Developed and optimized internal aerospace monitoring dashboards** using **HTML, CSS, JavaScript, and Java Servlets**, improving user experience and load performance.
- Designed **modular web components** to simplify code maintenance and enable reuse across multiple internal tools.
- Worked with cross-functional engineering teams to ensure accurate **real-time telemetry data**, enhancing reliability of critical aircraft monitoring systems.

LEADERSHIP EXPERIENCE

Secretary

TEDx Club, Arizona State University

September 2023 - Present

Tempe, Arizona

- Managed **30+ TEDx event meetings**, ensuring **organizational efficiency** and **alignment of team goals**.
- Strengthened **team collaboration** across **15+ members**, facilitating **strategic planning** for high-impact events.