

Kushagra Tandon

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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, C#, OCaml

Frameworks & Tools: Flask, Django, React.js, Node.js, TypeScript, Bootstrap, TensorFlow, Backtrader, Binance API

Databases & Cloud: MongoDB, MySQL, AWS, REST APIs

Other: Git, Linux, OpenCV, Agile, Open Source, Microsoft Suite

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 | *Python, TensorFlow, NLP, Scikit-learn*

- Achieved **~19 % annualized return** in backtests by building a news-driven trading strategy processing **120+ headlines/run**.
- 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 | *Python, Scikit-learn, React, Flask*

- Developed a web app that predicts credit risk 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.

Facial Recognition Attendance System | *Python, TensorFlow, OpenCV*

- Developed a real-time **facial recognition system** for classroom and corporate attendance.
- Applied deep learning techniques to boost **identification accuracy** and tracking efficiency.
- Designed a simple dashboard to visualize attendance results.

EXPERIENCE

Research Aide

October 2023 - May 2025

ASU School Of Earth & Space Exploration

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

June 2023 - August 2023

Hindustan Aeronautics Limited

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

September 2023 - Present

TEDx Club, Arizona State University

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.
- Enhanced documentation processes, improving **event execution efficiency** and **stakeholder communication**.