

# ADITYA JOSHI

HP: +65 89341752    Email: [aditya.joshi@u.nus.edu](mailto:aditya.joshi@u.nus.edu)  
Portfolio: <https://thisisaditya17.github.io/portfolio-website/>  
LinkedIn: [www.linkedin.com/in/thisisaditya17](https://www.linkedin.com/in/thisisaditya17)

## EDUCATION

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**National University of Singapore (NUS)** **Aug 2023 – Apr 2027**  
**Bachelor of Computing in Computer Science | Artificial Intelligence**  
• CGPA: 4.00

## EXPERIENCE

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**R&D Software Developer Intern, Laconic Technology Company Limited, Bangkok, Thailand** **May 2025 – Aug 2025**

- Designed and implemented 100+ REST APIs using Java (Spring Boot), ensuring alignment with frontend integration requirements
- Designed PostgreSQL schema for POS + e-commerce platform, mapping entities to business workflows
- Prototyped an AI-powered chatbot using Python and Retrieval-Augmented Generation (RAG) with Vanna & Llama3, enabling natural language data queries
- Built and deployed MVP backend in under 3 months from research → competitor benchmarking → stakeholder feedback → implementation

**Tech Executive, Artimal, Singapore** **Oct 2024 – Jan 2025**  

- Led tech initiatives for Artimal, developing chatbot to be used as mascots
- Maintained the database for the chatbot in MySQL
- Managed software projects, ensuring timely delivery and alignment with business goals

**Co-Founder, Bookism, Khatima, India** **Jan 2022 - Sep 2022**  

- Co-founded a book rental start-up along and over-looked shipping and collection
- Gathered 200 people initially within a week and rented over 30 books
- Conducted 3 seminars and got more than 100 students onboard

## PROJECTS

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**Flight Delay Prediction System** **Sep 2025**  

- Developed advanced flight delay prediction system with XGBoost achieving 77% accuracy on 558K+ flight data from Bureau of Transportation Statistics
- Engineered multi-model pipeline incorporating distance and duration estimators, enhancing prediction robustness through feature engineering
- Built scalable REST API with Flask backend
- Created dynamic React frontend with responsive design and gradient animations

**Huffman Compressor** **Sep 2025**  

- Implemented complete Huffman coding algorithm achieving 30-50% compression ratios using priority queue tree construction and greedy optimization
- Engineered bit-level file manipulation with custom binary format including embedded metadata for lossless compression/decompression cycles

- Built professional CLI with Maven packaging, featuring compression statistics and cross-platform executable JAR distribution

#### **Tric-Tac-Toe**

**Sep 2025**

- Designed and developed a custom Tic Tac Toe variant with move-removal mechanics, enhancing gameplay complexity
- Implemented AI opponent using Negamax with alpha-beta pruning, achieving competitive decision-making
- Built an interactive web-based interface with Streamlit, featuring responsive design, custom styling, and real-time updates

#### **Video Game Sales Predictor**

**Apr 2025**

- Developed a machine learning model in Python using Pandas and Scikit-learn to predict global video game sales with Linear Regression
- Visualized model predictions versus actual sales through detailed scatter plots created in Seaborn, enabling clearer assessment of model performance

#### **TalentSG**

**Aug 2024 – Dec 2024**

- Built a candidate and job role management system tailored for HR professionals and recruiters
- Designed and implemented a hybrid CLI-GUI interface using Java and JavaFX, enabling efficient text-based commands with visual feedback

#### **KAYO, Orbital Project**

**May 2024 - Aug 2024**

- Developed "KAYO", a web-based platform aimed at improving the accuracy and reliability of AI models like ChatGPT for document analysis
- The platform minimizes hallucinations and irrelevant outputs, enhancing the extraction of relevant information for academic, research, and professional use
- Achieved "Level Apollo 11," the second-highest level for the project
- Responsible for backend development and ensuring the smooth functionality of the KAYO platform

### **TECHNICAL SKILLS & ABILITIES**

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Programming Languages: Python, Java, C, C++, HTML, CSS, TypeScript  
 Frameworks and Tools: Spring Boot, React, Git, GitHub, RAG, Vanna, Llama3, PyTorch, XGBoost, Scikit-learn, Seabreeze, HuggingFace, Streamlit, Pandas, Seabreeze  
 Database: PostgreSQL, MySQL  
 Others: MATLAB, Adobe Creative Cloud, DaVinci Resolve, FL Studio, Ableton Live

### **CO-CURRICULA AND VOLUNTEER EXPERIENCE**

#### **Publicity Head, NUS Electronic Music Lab, Singapore**

**Aug 2024 – May 2025**

- Increased online engagement by managing social media and producing event publicity materials
- Promoted workshops and performances, boosting participation and visibility

#### **Member, Softball (Kent Ridge Hall), Singapore**

**Aug 2023 – May 2025**

- Represented the hall in Inter-Hall Games (IHG) softball competitions
- Contributed to the team's achievement as 2nd Runner-up in IHG

**Member, Video Production Team (Kent Ridge Hall), Singapore** **Oct 2023 – May 2024**

- Part of video production team responsible for recording events conducted by Kent Ridge Hall and creating appropriately edited content for promotion and publicity

**Member, Tara Baal Sanstha, Khatima, India** **Sep 2021**

- Taught 20 underprivileged children and donated books and other literatures

## **ACTIVITIES AND INTERESTS**

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- Language Proficiency: English [Fluent], Hindi [Mother Tongue]
- Music Production, Filmmaking, Poetry, Basketball, Hip-Hop, Anime, Photography