

ARYAN KUMAWAT

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EDUCATION

The University of Sydney, Australia (2027)

Bachelor of Advanced Computing (Double Majoring in Computational Data Science and Finance)

- Sydney India Scholar scholarship recipient
- Sydney International Student Award

Jayshree Periwala International School, India (2022)

IBDP (International Baccalaureate Diploma Program)

- Subject excellence in Physics, Mathematics AA, Computer Science, Economics, English and Hindi.

PROJECTS

Alopecia Areata Risk Model

R, Machine Learning, Shiny, Bioinformatics

- Developed a **machine learning-based risk prediction model** using gene expression data from scalp skin biopsies.
- Integrated multiple ML algorithms with an **interactive Shiny web application** for real-time risk assessment.
- Performed **data preprocessing, feature selection, and model evaluation** to ensure robustness and interpretability.

SlideSmith – Multi-agent AI Slide Maker

Next.js, TypeScript, React, Ollama, Phi-4

- Developed a **production-ready, distributed multi-agent AI system** for automated slide deck generation.
- Designed modular agent workflows for **content generation, semantic validation, and quality assurance**.
- Implemented scalable architecture supporting both **cloud and edge LLM deployments**.
- Built a responsive frontend enabling real-time interaction with AI-generated outputs.

Online Exam Management System

Django, Django REST Framework, SQLite, Alpine.js

- Built a **full-stack online examination platform** to enable secure remote assessments during COVID-19 school closures.
- Implemented **anti-cheat mechanisms** and role-based access for students and faculty.
- Designed **responsive UI** and dynamic dashboards for exam management and performance tracking.
- Developed RESTful APIs to support a scalable and modular backend architecture.

Friday Assistant

Rust, CLI, Desktop UI, Speech Recognition, Text-to-Speech

- Developed a **privacy-first voice assistant** with a local Rust workspace architecture, featuring wake word detection, automatic speech recognition (ASR), intent handling, and text-to-speech (TTS).
- Built a **modular end-to-end pipeline** including a core library, command-line interface, and desktop UI shell.
- Focused on **local processing for enhanced user privacy**, demonstrating a fully self-contained assistant without cloud dependencies.

Gym Workout Planner

Python, Tkinter

- Developed an **interactive, personalized workout planning platform** that generates training programs based on age, gender, fitness goals, and schedule.
- Implemented **weight tracking, rest day recommendations, and performance statistics** to help users monitor progress.
- Built a **graphical user interface using Tkinter** for seamless user interaction.

Wizard Tower Defence Game

Java, Gradle, JUnit5, Processing

- Developed a **tower defense game** featuring wave-based combat, strategic tower placement, and progressive difficulty. Implemented **game mechanics, tower upgrades, and enemy pathing** using Java and Processing.
- Designed and executed **unit tests with JUnit5** to ensure game stability and correct scoring logic.

EXPERIENCE AND LEADERSHIP

Digital Impact Tech Consultant

180 Degrees Consulting – Sydney

- Applied **data science and finance** to optimise digital strategies for nonprofit organisations.
- Delivered **actionable insights and technology-driven recommendations** in cross-functional teams.

Technology Consulting Job Simulation

Deloitte Australia (Forage)

- Completed Deloitte's Technology Job Simulation, performing practical tasks in **coding, data analysis, development, cyber security, and forensic technology**.

Analyst Trainee

Sydney Impact Investing Society (SUIIS)

- Conducted **investment analysis, impact measurement, and risk assessment** through case studies and pitches.

Design Director

Sydney University Mathematics Society (SUMS)

- Managed a design team to deliver **high-impact visual assets** and partnerships.

Social Media Officer – Operations

Sydney UAV Engineering

- Developed and managed **social media strategies**, content, and engagement analytics for event promotion.

Outgoing Global Volunteer (oGV)

AIESEC Australia Ltd

- Participated in **international community projects**, developing leadership and cross-cultural communication skills.

Academic Tutor (STEM)

Ezy Math Tutoring

- Tutored **Mathematics and Computer Science** for students in Grades 1–10.

TECHNICAL SKILLS

Languages: Python, R, Java, TypeScript, JavaScript, SQL

Frameworks & Libraries: React, Next.js, Django, Django REST Framework, Shiny

AI / Machine Learning: Machine Learning, Multi-Agent Systems, Gene Expression Analysis

Tools & Platforms: Git, Gradle, Ollama, Processing

Databases: SQLite

Testing: Junit5

INTERESTS

AI systems & emerging technologies, data science & analytics, financial markets, impact investing, strength training, drumming, cinematography

REFEREES AVAILABLE ON REQUEST