

Aishwarya Anand

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Internship Availability (Credit-Bearing & Full-Time): Dec 1, 2025 – Jul 31, 2026

Singapore Permanent Resident

EDUCATION

Nanyang Technological University (NTU), Singapore

B.Eng. (Honours) Computer Science & Specialisation in AI & Data Science

Jul 2022 – Aug 2026

College of Computing & Data Science

NPS International School, Singapore

International Baccalaureate (IB) Diploma Programme

Mar 2020 – Jul 2022

High School (XI & XII)

PROFESSIONAL WORK EXPERIENCE

DXC Technology (ICA Singapore Arrival Card)

Software Development Intern — Automation

May – Aug 2025

Singapore (Hybrid)

- Built a Java tool to auto-generate test-case matrices from requirements, cutting QA preparation time by 60%.
- Shipped an ID-mapping service with Excel (Apache POI) export, which eliminated manual matching and versioning errors and reduced support tickets by 30%.
- Delivered a Swing CRUD UI with quick inline guides that onboarded new users in under one hour per session.

Earth Observatory of Singapore (Ventrx) & Asian School of the Environment, NTU

Climate Risk Web App — Data & Dashboards

Jun 2025 – Present

Singapore (Hybrid)

- Ingested multi-hazard REST feeds into Postgres and exposed key metrics via Rails APIs for a React dashboard.
- Deployed the app on Azure with Docker, optimising asset bundling and code-splitting to cut Largest Contentful Paint (LCP) from 2.8 s to 1.7 s at the 95th percentile (even the slowest 5% of users benefited).
- Hardened system monitoring and consolidated logs, reducing incident-triage time by 35% across services.

Singapore Food Agency (WKWSC), NTU

Research Analyst — Singapore Food Study (Alt-Protein)

May – Jul 2025

Singapore (Off-site)

- Analysed a nationwide survey (N=3,148) for the SFA's "30 by 30" initiative; found 60% higher willingness for plant-based vs insect-based protein.
- Ran a messaging test (N=811); framing alt-protein as "tastes like meat" lifted purchase intent by 22% (p<0.05).
- Tracked social discourse across 100+ campaigns, identifying a 3x growth in alt-protein conversation from 2022 to 2023.

The School of Mechanical and Aerospace Engineering (MAE), NTU

Process Automation (Excel/VBA)

Jul – Aug 2025

Singapore (Off-site)

- Automated a Forms-to-Excel ETL pipeline, processing 70+ records in under 10 seconds with full audit trails.
- Built a tool to auto-generate 36 letters and batch-create PDFs in under 3 minutes, saving HR 2+ hours per week.
- Standardised the payment workflow, reducing claims processing time from 30 minutes to just 5 minutes.

Inspiraz Technology (VizCam) Pte Ltd

Deep Learning Engineer (Computer Vision/OCR)

Dec 2024 – Feb 2025

Singapore (On-site)

- Deployed YOLOv8-based defect and OCR models, cutting production line inspection time by 50%.
- Achieved 99.8% character-level accuracy (0.2% CER) on a proprietary test set of 500 printed-label images.
- Automated the end-to-end ML pipeline (ingest, label, train, evaluate), reducing model iteration time by 40%.
- Developed a custom PyQt annotation tool that increased labelling throughput and consistency for the team.

SKILLS

- Languages & Programming:** Python, Java, SQL, JavaScript, C, HTML/CSS
- Machine Learning & AI:** Scikit-Learn, XGBoost, CNNs, GANs, Transformers, Time Series Forecasting, LLMs
- Data Analysis & NLP:** Pandas, NumPy, NLTK, SpaCy, Sentiment Analysis, Regression, Clustering
- Deep Learning & Computer Vision:** PyTorch, YOLOv5-v8, OpenCV, OCR, Image Classification
- Web & Full-Stack Development:** React.js, Ruby on Rails, Flask, FastAPI, REST APIs, MVC Architecture
- Tools & Platforms:** Docker, Git, Microsoft Azure, Streamlit, Jupyter, Postman, Excel (Advanced VBA), Apache POI
- Databases:** PostgreSQL, MySQL, MongoDB, Firebase

ACADEMIC PROJECTS

FYP: Predicting Antibody–Antigen Binding Affinity

GNN/Transformer on AlphaFold/ESM-2; Datasets: SAbDab, AlphaFold-DB

Aug 2025 – Jun 2026

Biomedical Informatics Lab, NTU

- Integrating AlphaFold/ESM-2 features with GNN/Transformer for Antibody–Antigen binding affinity prediction.

Autonomous Robot Car (Maze Traversal)

Perception + Control

YOLOv5, Raspberry Pi (RPi), STM32

Role: Data & Model; Embedded Integration

- Trained a custom YOLOv5 model (Roboflow pipeline) and deployed real-time inference on RPi/OpenCV for object-based maze navigation.
- Integrated STM32 motor control over UART and fused detections with line-tracking; added an Android UI for manual override.

Cross-Border Worker App

Frontend Development

React, REST APIs, i18n

Role: UI/UX, Feature Modules

- Built user modules (auth/profile), a remittance calculator with live FX rates, and a curated news feed in React.
- Integrated the MITRA chatbot and multilingual support (i18n) to improve task completion for non-English users.

Camp Management System (Java CLI)

Console Application

Java, MVC

Role: Application Coder; Documentation Lead

- Implemented a modular MVC CLI for camp creation, registration, approvals, feedback, and reporting with clear service boundaries.

SELECTED PROJECTS

MLB Attendance Forecasting

$R^2=0.83$

Gradient Boosting, Bayesian what-ifs

- Trained on 26 seasons; **–20% MAE** vs baseline; **simulated +8%** target-day lift in historical what-if tests.

Fantasy Football Performance

+15% vs public projections

Random Forest, SQL features

- Back-tested 3 seasons; **+15%** over public projections on hold-out weeks; shipped explainer charts for lineup decisions.

Wine Quality Classification

Minority F1 +15%

XGBoost, SMOTETomek

- Improved minority-class performance **+15%** via SMOTETomek resampling and model tuning on 6,497 samples.

Job Salary Prediction (Indeed.com)

Regression (MAE/MAPE)

Web scraping, NLP features

- Scraped 5,000+ postings across 50 cities; engineered text+structured features; **reduced MAE vs baseline** and shipped salary bands by city/level.

Diabetes Detection

+10% over baseline

Ensemble ML, Spark

- Compared models on 700+ records; **+10%** diagnostic accuracy over baseline; streamlined Spark preprocessing.

CERTIFICATIONS

- Cloud & DevOps:** AWS Cloud Technical Essentials, AWS EC2 (AWS); OCI Foundations (Oracle Corporation)
- Machine Learning & Math Foundations:** Mathematics for Machine Learning (Linear Algebra, Multivariable Calculus) (Imperial College London); Mathematics for ML & DS Specialization (DeepLearning.AI); Data Structures & Algorithms / Databases (CU Boulder / Stanford)
- Blockchain & Web3:** Blockchain & Cryptocurrency Explained (University of Michigan); Intro to Blockchain & Bitcoin (INSEAD)
- NLP (self-paced):** Natural Language Processing with Transformers, NLP Practical Projects (Udemy)

LEADERSHIP, EVENTS, AND ADMINISTRATIVE EXPERIENCE

Leadership & Outreach (Selected)

High-Impact Roles

- Chief Group Leader, NTU SCSE TOP** — Led 40 facilitators for a 5-day “Camp Interstellar” (600 freshmen; S\$12k); **zero safety incidents** and **+18%** post-camp engagement.
- Student Head Ambassador, NTU Welcome Centre** — Delivered **40+** sustainability-themed VIP tours; **9** corporate leads; trained **12** juniors (25% prep time).
- Founder & President, Economics & Business Club (NPS)** — Built a 200-member club; monthly FinTech workshops (**92%** turnout); secured **S\$2k** sponsorship for a first inter-school case competition.
- Communication Coach, LCC** - Served as an academic mentor for NTU students to improve their written assignments.