

Aldrich Vincent

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EDUCATION

Bina Tunas Bangsa School (High School)

Jakarta

International Baccalaureate (IB) Diploma Programme (Grade : 37/45)

Graduation Date: May 2023

Jakarta International College

Jakarta

Bachelor of Computer Science (GPA: 4.0/4.0)

Graduation Date: Feb 2024

Monash University

Melbourne, VIC

Bachelor of Computer Science (GPA : 3.81/4.0)

Graduation Date: Dec 2025

TECHNICAL SKILLS

- Languages: Python, Java, SQL, JavaScript
- Tools & Frameworks : Pandas, NumPy, Firebase, Realtime DB, Git, Tableau, PowerBI
- Areas of Interest: Data Science, Machine Learning, Recommender Systems, Data Visualization

PROJECT EXPERIENCE

Monash University - Data Visualization

Melbourne

Climate Extremes & Environmental Impact Article

Jul 2025 - Nov 2025

- Designed and developed an advanced interactive climate analytics dashboard using Vega-Lite and Vega, integrating geospatial, temporal, and multivariate visualizations to explore climate change impacts.
- Built a global temperature anomaly map (1940–2025) with GIS projections and TopoJSON, enabling year-based exploration and country-level selection.
- Implemented linked and coordinated views, synchronizing map selections with time-series bar charts to reveal long-term temperature trends by country.
- Developed multi-layered visualizations including climate driver vs rainfall analysis (ENSO, IOD, SAM), radar charts, bubble plots, treemaps, and annotated event timelines.
- Applied advanced interaction techniques such as cross-view signal binding, legend-based filtering, hover tooltips, opacity highlighting, and event annotations for storytelling.
- Integrated high-resolution GIS datasets to visualize koala habitats, bushfire hotspots, and state-level environmental impacts across Australia.
- Prioritized visual clarity and UX, using custom typography, color semantics, transparent layering, and SVG rendering for performance and readability.

Monash University - Data Warehouse

Melbourne

MonEquip Data Warehousing Project

Jul 2025 - Nov 2025

- Designed and implemented an end-to-end data warehouse for Monash Equipment Centre (MonEquip), an Australian construction equipment sales and hire company, to support business-focused reporting and analytics
- Performed extensive data exploration and cleaning on operational datasets, resolving duplicates, incorrect pricing calculations, invalid foreign keys, date anomalies, and inconsistent formatting to ensure data integrity
- Designed a star schema with fact tables for sales and hire transactions and dimension tables for time, category, branch, and customer type, enabling efficient multi-dimensional analysis
- Applied Slowly Changing Dimensions (SCD Type 2) and temporal modelling concepts to preserve historical accuracy for equipment pricing and attributes
- Developed advanced SQL analytics using ROLLUP, CUBE, window functions, and ranking methods to analyse revenue trends, seasonality, category performance, branch-level insights, and sales vs hire dynamics
- Built an interactive Power BI dashboard visualising key KPIs such as revenue growth, seasonal demand, top-performing equipment categories, and branch performance to support management decision-making

Monash University - FIT3163 Data Science Project

Melbourne, VIC

- Developed a full-stack NBA Player Ranking Dashboard using Flask (Python), R, and MongoDB to deliver real-time, transparent player performance rankings with interactive JavaScript and Chart.js visualisations
- Designed and implemented a custom ranking algorithm incorporating z-score normalisation, percentile rankings, PCA, and weighted composite scoring to fairly evaluate players across positions
- Built automated data pipelines using hoopR and nbstatR in R to fetch, clean, and process live NBA data, with weekly scheduled updates via cron jobs
- Implemented interactive features including side-by-side player comparison, hot/cold streak tracking, and advanced filtering by position, team, and statistical category
- Containerised the application with Docker and Docker Compose for consistent development and deployment environments
- Collaborated in a team of 4 using Agile methodology with two-week sprints, Jira for backlog management, GitHub for version control, and Discord for real-time communication

Monash Macathon 2025**Melbourne, VIC***Monash Mates -- Peer Mentoring App (Team Project)**Apr 2025 - Apr 2025*

- Developed an Android-based peer mentoring platform in Android Studio connecting Monash students and alumni for tailored academic and career support.
- Built a recommendation system to match mentees with mentors based on interests, goals, and academic background using Firebase Firestore queries
- Implemented real-time chat, secure login, and media upload using Firebase (Auth, Realtime DB, Firestore, Storage) and Jetpack Compose in Kotlin
- Collaborated in a team of 4 using Agile methodology, ensuring efficient task allocation and version control with Git

WORK EXPERIENCE**Veve Clothing****Jakarta***Operational Management**Jan 2022 - Dec 2022*

- Designed and maintained a stock and sales tracking spreadsheet in Excel for data-driven decision making
- Coordinated logistics workflows, reducing inventory processing time by streamlining order tracking
- Managed supplier negotiations and cost analysis to ensure efficiency in procurement
- Led product research and social media analytics to improve campaign targeting and engagement

EXTRACURRICULAR & LEADERSHIP**Bina Tunas Bangsa School****Jakarta***OSIS (Student Council)**Jan 2021 - Dec 2023*

- Coordinated student-led initiatives such as school events, community service projects, and academic competitions, fostering leadership and collaboration
- Acted as a liaison between students and school administration, representing student concerns and contributing to decision-making
- Led a team of 10 peers to successfully organize a charity donation upon homeless people

AWARDS**Top 10 Academic
Excellence Award**

: Recognized among the top 10 highest-performing IB students at Bina Tunas Bangsa School

**Principal's Merit
Award**

: Awarded for outstanding academic performance and exemplary conduct in Jakarta International College