

# AMOGELANG GIFT KOTU

## COMPUTER SCIENCES & INFORMATICS

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### PROFILE SUMMARY

I am a motivated BSc Information Technology in Computer Sciences & Informatics student at the University of Johannesburg, building a strong foundation in software engineering. My coursework has provided me with hands-on experience in Object-Oriented Programming with C++ and Java, designing and implementing efficient data structures (trees, graphs, hash tables) and algorithms, and developing relational databases from concept to implementation. I have further applied these skills in projects involving network programming and multi-tier web application design. I am eager to apply my problem-solving abilities and technical skills to a challenging software development internship.

### EDUCATION

**2020**

Tsogo Secondary School

**Grade 12 - National Senior Certificate**

- Mathematics
- Physical Sciences
- Geography
- Life Sciences
- Life Orientation
- English
- Setswana

**2022 - 2025**

University of Johannesburg

**BSc IT in Computer Science & Informatics**

- Introduction to Algorithm Development (VB, C++)
- Introduction to Data Structures (VB, C++)
- Object-Oriented Programming (Java)
- Data Communications (Java)
- Database Design (SQL)
- Internet Electronic Commerce (HTML, CSS, JavaScript, C#, SQL)
- Advanced Data Structures and Algorithms (Java)
- Operating System Concepts (80x86 Assembly)
- Introduction to Software Engineering (Software Design)
- Advanced Software Engineering (Development, Testing, Deployment)

### SKILLS

- Programming Languages
  - Visual Basic | Java | C++ | SQL | HTML | CSS | JavaScript | C# | React | Node.js | ...
- Software Development & Tools
  - IDEs: Visual Studio 2019, Visual Studio Code, Code::Blocks, Eclipse
  - Version Control: Git
  - DB Management: MySQL, Supabase
  - Design: Figma (Wireframes), Draw.io (UML), Canva
- Leadership: Project Leader for Third Year Project
- Communication: Project Presentation & Live Demo

# PROJECTS

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## Jul 2024 - Oct 2024

University of  
Johannesburg

### E-Thrifting Website [Academic Group Project]

- Developed a full stack e-commerce web application for second-hand clothing, following a multi tier client/server architecture
- Engineered the database using SQL, designing normalized tables and writing complex queries to handle user data, product listings, and transactions.
- Implemented core e-commerce functionalities including user registration, product catalog with search/filter, shopping cart, and a secure checkout process.
- Built a dynamic front-end using HTML, CSS, and JavaScript to create an intuitive user interface for product browsing and management.
- Developed the server-side logic using Visual Basic .NET to handle business rules, user authentication, and database communication.
- Utilized Git for version control and followed Agile principles through weekly sprints and team meetings to ensure project milestones were met.

## Feb 2025 - Oct 2025

University of  
Johannesburg | Ranked  
#14 in UJ ACSSE Top  
20 Projects of 2025

### Benchmark Trader - Guided Demo Trading Platform

- Designed & Developed a comprehensive full-stack trading platform from concept to deployment, beginning with UML use case and sequence diagrams to model the complete trade lifecycle and user-broker interactions.
- Engineered the system architecture by first creating a normalized database schema to manage user profiles, risk assessments, and trade histories, then implementing the backend with Node.js & Prisma and a responsive frontend with React, TypeScript & Tailwind CSS.
- Transformed wireframes into a functional UI/UX, building a real-time broker dashboard with integrated financial news and analytics, and a secure direct messaging system to facilitate client-broker communication.
- Implemented the core business logic, including a smart matching algorithm that pairs users with brokers based on a dynamic risk-assessment questionnaire, automating the entire trade process from proposal to profit withdrawal.
- Extended platform accessibility by developing a companion Flutter mobile app, providing on-the-go access to portfolios, messaging, and market updates.
- Technologies Used: React, TypeScript, Tailwind CSS, Node.js, Prisma, Supabase, Flutter
- Marketing Website:
  - <https://adam.uj.ac.za/projectsday/teamweb/Team32/index.html>