

# AFONSO MANATA

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## Education

### Instituto Superior Técnico

Bachelor of Computer Science and Engineering

Expected Graduation: June 2027

Lisbon, Portugal

- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Object-Oriented Programming.

## Work Experience

### Promptly Health

Software Engineer Intern

September 2025 – December 2025

Remote

- Architected and managed the lifecycle of **6+** AWS RDS services inside the **Kubernetes Cluster** using **Crossplane**.
- Implemented a **Go templating** function, improving **readability** and reducing **infrastructure complexity** by **20%**.
- Improved **security** by **100%** by moving **AWS ElastiCache** credentials into multiple **Kubernetes Secrets**.
- Enabled **multi-environment** support, improving deployment **scalability** and reducing **duplication**.

### Noesis

July 2025 – September 2025

Software Engineer Intern

Remote

- Engineered a **N8N Workflow** that generates **cybersecurity reports**, saving **2+** weeks annually for **15+ engineers**.
- Built **Python/JavaScript** scripts that generate **adaptable graphs**, eliminating the **costs** of using **external APIs**.
- Implemented **multi-threading** in **N8N** reducing **runtime** by **67.2%**.
- Developed multiple **automation** scripts to make scheduled **queries** to an **ElasticSearch**, which eliminated the need for **manual input** and reduced the number of **queries** by **66.6%**.

### Junitec

February 2025 – September 2025

Lisbon, Portugal

Software Engineer

- Worked alongside **top engineers** from my university at **Europe's Best Junior Enterprise**, which generated over **€200k in annual revenue** by building solutions for leading enterprises.
- Developed **real-time** collaboration features using **WebSockets in Go**, reducing manual paperwork by **60%**.
- Wrote **backend logic in Go** for **SQLite integration**, streamlining the management of **20k+ stock items**.
- Engineered a **full-stack** inventory management with a **React.js** interface and a **Go backend**, containerizing the entire project with **Docker**, which streamlined operations for a non-profit supporting **40+ abandoned children annually**.

## Projects

### JustAQuote | Source Code

Java | Spring Boot | REST API | Redis | PostgreSQL | Docker

- Designed and implemented a **REST API** using **Spring Boot**, enabling **scalable delivery** of daily motivational quotes.
- Optimized **API performance** with **Redis caching**, reducing response latency from **360ms** to **< 5ms**.
- Engineered the **database schema** using **PostgreSQL** and containerized the services with **Docker**.

### GemSolver | Source Code | Demo Video

JavaScript | Node.js | Gemini API

- Engineered an **AI-powered** screenshot-to-answer tool with **Node.js** and **Gemini API**, reducing search time by **75%**.
- Processed **200+ screenshots** in one semester, automating my study workflow and contributing to a **top 1% grade**.

### Library Management System | Source Code

Java | Design Patterns

- Architected a Library Management System ensuring **100% abstraction** of business logic by leveraging decoupled code.
- Implemented robust **design patterns** including **Strategy** for workflow orchestration, **Observer** for UI updates, **Command** for request handling, and **Visitor** for core logic traversal, reducing feature integration time by **40%**.
- Developed exception handling for **10+ workflows** preventing invalid operations and ensuring zero **runtime errors**.

## Technical Skills

**Languages:** Python, Java, Go (Golang), SQL, C/C++, JavaScript, HTML/CSS.

**Frameworks & Libraries:** PostgreSQL, Spring Boot, Redis, REST APIs, SQLite, Elasticsearch, Node.js, React.js.

**Developer Tools & Cloud:** Git, Docker, AWS, Kubernetes, Crossplane, ArgoCD, Postman, Neovim, Unix/Linux.

**Certifications & Awards:** AWS Cloud Essentials, IBM Full-Stack JavaScript Developer, City's Best High School Student.