Sultan Alzoghaibi

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TECHNICAL SKILLS

- **Languages:** Java, TypeScript, JavaScript, Python, SQL, HTML/CSS, JSON, XML, C, R
- **Frameworks:** Spring Boot, React, Next.js, Tailwind CSS, JUnit, Node.js, Motion
- **APIs & Integrations:** RESTful APIs, WebSocket, Slack API, Stripe API, OpenAI API
- **Libraries & Tools:** Git, Playwright, Figma, Visual Studio Code, IntelliJ IDEA, PyCharm, pgAdmin, Shadcn-UI, Acerternity-UI
- **Cloud & Infrastructure:** AWS ECS Fargate, EC2, Docker, CloudWatch, Supabase, PostgreSQL

EDUCATION

Bachelor of Science, Computer Science   **Sep. 2022 – Present**
University of Calgary, Alberta

- Enrolled in Science **Co-op Program,** projected **GPA: 3.96** (2024–2025 Academic Year)
- Relevant courses: Programming in Python, Object-Oriented Programming in Java, Data Structures and Algorithms, Intro to Software Engineering
- Award: 2nd place out of 43 Teams |Div. 2 |Alberta Collegiate Programming Competition 2024

PROJECTS

Horizontally Scaling Matchmaking Distributed System | Java, JavaFX, Docker, AWS ECS Fargate, CloudWatch, AWS SDK

- Deployed a SearchServer that creates and pairs players to a dedicated GameServer on AWS ECS, resulting in **0 coupling** between matchmaking logic and each gameplay session.
- Implemented **dynamic warm pooling** using a Queue<IpAddress> per game mode, reducing matchmaking time by **99.1%** (~46s →0.4s). The system **automatically scales up or down pool size** based on server load.
- Connected players using a **multi-threaded** HashMap<gameMode, List<Player>> and event-driven threads, **enabling concurrent matchmaking** across game modes with **sub-950ms latency** under load.
- In GameServer and Player instances, **multi-threaded a chat feature** on a separate port with real-time free-flowing messaging running in parallel with strict turn-based sequencing, maintaining message latency below **280ms.**
- **Links:** 2min demo vid |GitHub |Portfolio site

Distributed Slack Survey Platform (In Progress) |Java, Spring Boot, gRPC, PostgreSQL, Redis, Kubernetes, AWS EKS

- Designing a distributed Slack survey system for weekly team health tracking: Slack API → load balancer → Spring Boot server → gRPC microservice → PostgreSQL (storage) and Redis (caching). Currently using ngrok for local Slack API testing, with planned scalable deployment on Kubernetes (AWS EKS). **Expected completion: Spring 2025**
- **Progress:** Integrated Slack's slash command via **REST API** into a **Spring Boot server** that uses a hash map to delegate commands to threads, enabling interaction with a **relational PostgreSQL database** of **5 connected schemas** (pgAdmin-monitored).
- **Links:** System Design FigJam | GitHub

Pacman with Smart Pathing Ghost AI | Java, JavaFx

- Recreated Pacman with original ghost behavior using JavaFX and OOP (inheritance, polymorphism, encapsulation), achieving a **102.3%** grade and implementing **O(1)** pathing logic.
- Led **85%** of codebase, building a synced GUI-2D array backend and creating clear FigJam diagrams to ensure clear team understanding and completing the project in **2 weeks**.
- **Links:** demo vid |GitLab |FigJam Planning |Portfolio site

EXPERIENCE

Full-Stack Software Developer   **Jan. 2025 – Apr. 2025**
TechStart UCalgary, Calgary, Alberta | Website | GitHub

- Contributed to migrating from React with CSS to **Next.js with Tailwind CSS**, utilizing its SSR capabilities to improve SEO by an estimated **25%** and initial page load times by **30%.**
- Built a **Stripe API** integration using **GET/POST RESTful API endpoints**, reducing average transaction time by **2 minutes** compared to Google Forms and enabling new item additions with **0 coding** via Stripe's dashboard.
- Collaborated in an **Agile team of 5**, promoting clear communication and enforcing Git best practices to ensure **0 bugs are pushed to the main**, improving code quality and release stability.

VP UX/UI Design   **Aug. 2024 – Apr. 2025**
TechStart UCalgary, Calgary, Alberta

- Mentored by a UX/UI graduate, then taught TechStart's project members about user research, design skill-building, and AGILE UX/UI practices—earning 83% positive feedback.