

ALAN JAMES

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[in alan-james-in](#) | [alanjames00](#)

Jalandhar City, Punjab, India

EXPERIENCE

• SampurnKart | [LINK](#)

Oct 2023 - Present

Backend Engineer

Jalandhar, India

- Designed and developed the entire backend architecture for an e-commerce startup end-to-end
- Developed set of internal tools that reduced operational workload by 60% and improved team efficiency, saving 30 hours per week.
- Implemented robust and scalable cloud infrastructure for the organization.
- Reduced cloud expenses by 50% through migration and optimization of the cloud infrastructure.

EDUCATION

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Lovely Professional University

Aug 2022 - Aug 2026

B.Tech In Computer Science And Engineering

Jalandhar, India

* GPA: 8.85/10.00

PROJECTS

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RunX: A high-speed online code compiler engine | [LINK](#)

Oct 2023 - Nov 2023

Tools: Docker, Nodejs, Express, Linux, Shellscript

- * Implemented isolated, secure environments using containerization for error-free and interference-free code execution.
- * Added support for multiple programming languages, including C, C++, Python, and JavaScript
- * Optimized compilation and execution speeds to be nearly as fast as local execution
- * Engineered truly parallel code execution and caching mechanisms

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BlueberryDB: In-memory database with persistence | [LINK](#)

Oct 2024

Tools: Golang, file-based persistence (AOF), Custom Protocols

- * Redis-like in-memory database that supports commands for handling strings and hashes, providing fast and efficient data storage and retrieval capabilities.
- * Utilized Go routines to enable concurrent connections, supporting real-time multi-user access and enhancing scalability.
- * Implemented Append-Only File (AOF) persistence, securing data against crashes by logging operations for reliable data recovery.

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PairCode: Realtime Collaborative Code Editor | [LINK](#)

Sept 2023

Tools: ReactJs, WebSockets, NodeJs, Docker, Realtime Systems

- * Developed a real-time collaborative code editor for pair programming and interviews
- * Used Websockets for real-time collaboration
- * Implemented a built-in compiler supporting more than 10 programming languages and a feature rich modern editor

SKILLS

- **Programming Languages:** Golang, Javascript/Typescript, NodeJs, C/C++, Python, HTML/CSS, SQL, Shell
- **Web Technologies:** ReactJs, NextJS, ExpressJs, REST APIs, API Development
- **Database Systems:** PostgreSQL, MySQL, MongoDB, SQLite, Redis, ElasticSearch, Algolia and TypeSense
- **Cloud Technologies:** Google Cloud, Azure, AWS, Cloudflare Stack, DigitalOcean
- **DevOps & Version Control:** Git/Github, CI/CD, Github Actions, Docker, Docker Compose
- **Specialized Area:** API Development, Database Design And Development, Realtime Systems, Microservice Architecture, Linux
- **Other Skills:** Datastructures and Algorithms, API Security, Backend Security, Cybersecurity

HONORS AND AWARDS

- **NASA Space App Hackathon Global Finalist Nominee | [LINK](#)**
Space App Challenge, NASA
* Secured first position in IIT KGP Local Round and became one of the top 50 teams from India.
* Built a moonquakes computer simulation for visualizing moonquakes happened over years.

Oct 2023