

Ashwani Kumar Kamal

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EDUCATION

Indian Institute of Technology Kharagpur

Bachelor of Technology, Computer Science and Engineering — CGPA 8.82

Kharagpur, West Bengal

2020 - 2024

Delhi Public School Aligarh

Passed CBSE AISSE (Class X) with 93.17% and CBSE AISSCE (Class XII) with 98%

Aligarh, Uttar Pradesh

2020

EXPERIENCE

Schlumberger

Software Engineer | Go, Java 22, Spring Boot, Kubernetes, Google Cloud Platform
Pune, India

- Lead migration of **1M** customer records to isolate sensitive **PII**, improve security & reduce data coupling.
- Improved identity lookups with **SQL joins** and implemented **Redis caching** reducing query latency by **40%**.
- Completed comprehensive **unit tests** using Go's testing package and **testify** framework, achieving **90%** coverage.
- Built data package analytics microservice using **Java 22** with **Angular** microfrontend dashboards with charts.
- Decommissioned unused task services, cutting infrastructure cost by **\$630/month** and simplifying topology.

Piramal Retail Finance

Software Engineer Intern | Java 17, Spring Boot, Temporal, Postgres
Bengaluru, India

- Designed architecture for generic **scheduler** allowing **15+** microservices to schedule functions in a workflow.
- Engineered microservice handling **10K+** scheduled tasks/day with configurable retry, payload, timeout options.

Inter IIT Tech Meet 11.0 | Grow Simplee

Backend Developer - High Prep Event | Node.js, MongoDB, AWS, gRPC, RabbitMQ
Kanpur, India

- Part of the **Gold winning team** for Grow Simplee's Route Planning for Optimized Time Delivery Challenge.
- Deployed multiple HTTP and gRPC APIs and coordinated the overall workflow among different servers.
- Made the use of message queues using **RabbitMQ** for decoupling asynchronous requests from main server.
- Containerized services using **Docker** for quick testing and achieved **99.5%** uptime during **48**-hour competition.

OPEN SOURCE CONTRIBUTIONS

Lunatik | C, Lua, Linux | Scripting the kernel with Lua

Dec 2025 – Present

- Member of the Lua In Kernel organization, reviewing patches and proposing architecture improvements.
- Revamped Lua-kernel method dispatch by replacing lazy **index** lookups with eager closure wrapping on objects.
- Achieved a reduction of method call overhead from **275ns** to **128ns** across **1M** iterations in the hot path.

Etcdb | Go, gRPC | Distributed key-value store used by Kubernetes

Sep 2025

- Contributed multiple merged patches to etcd and its robustness-tests, improving test correctness and determinism.
- Eliminated duplicate delete/compact operations in robustness tests, reducing **linearization** and test overhead.

PROJECTS

Goof | Go, Nasm, Linux | Self Project

Jan 2025 – Apr 2025

- Made **Turing-complete**, statically typed programming language inspired by Forth for Linux x86_64 architecture.
- Developed a compiler directly emitting assembly in Go, supporting lexical analysis, parsing and **type inference**.
- Added support for user functions, Linux system calls, conditionals, loops, macros and basic memory manipulation.
- Wrote example programs like **game of life**, **bubble sort** and recursive **factorial** to showcase language capability.

COURSEWORK INFORMATION

Computer organization & Architecture | Operating Systems | Computer Networks | Machine Learning | Algorithms | Discrete Structures | Formal Language and Automata Theory | Software Engineering | Information Retrieval | Database Management Systems | Compilers | Probability & Statistics | Switching Circuits & Logic Design

TECHNICAL SKILLS

Languages: C++23, Java (22/17), Go, C, TypeScript, Python, Lua, Bash, SQL

Frameworks & Tools: Spring Boot, Angular, Git/GitHub, Docker, Kubernetes, ArgoCD, GKE, PostgreSQL, Redis

Testing & Quality: Go testing/testify, JUnit, Mockito, Unit Testing, Integration Testing