Arman Singh Kshatri

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Coursework

- Operating Systems
- AI and ML
- Data Structures
- DBMS
- Reinforcement Learning
- Deep Learning
- Distributed Systems
- Computer Vision

Education

IIIT Naya Raipur — Raipur, Chhattisgarh
B.Tech. in Data Science and Artificial Intelligence, CGPA: 8.39 — *2022 – 2026*

Experience

CreditSea - Software Engineering Intern — Remote, India
Technologies: Kubernetes, Docker, Terraform — *Nov 2024 - Present*

- Implemented robust CI/CD pipelines, reducing deployment times by 40% and improving overall system reliability.
- Collaborated with cross-functional teams to ensure seamless application deployment and monitoring using Kubernetes clusters.

GradeMyGrain - Software Developer Intern — Remote, India
Technologies: Flutter, Firebase — *May 2024 - June 2024*

- Developed a data collection mobile application using flutter allowing user to seamlessly collect data for dried Tea Samples.

Projects

Bhess-Engine: UCI Chess Engine | GitHub | IEEE

- Developed a high-performance chess engine in Rust utilizing Bitboard representation and Neural Network-based Evaluation (NNUE).
- Achieved 2 million nodes per second search speed using alpha-beta pruning and efficient memory management techniques.

Goback: Distributed Backup System | GitHub

- Reduced storage requirements by 65% through the implementation of differential backup methodologies.
- Focused on fault tolerance and data integrity in distributed environments.

Athleo: AI Running Coach | GitHub

- Built a Flutter-based fitness application featuring real-time GPS tracking, adaptive workout plans, and progress monitoring.
- Integrated a machine learning model for predicting race completion times with 89% accuracy, based on user fitness data.

Wator-OpenGL | GitHub

- Developed a predator-prey population dynamics simulation using OpenGL with visually interactive environments.
- Implemented in C with multi-threading to enhance performance and manage large-scale simulations efficiently.

Publications

"Bhess Engine: A Rust Chess Engine Using NNUE and Zobrist Hashing" - IEEE AIIoT 2024

- Presented novel approaches combining neural network evaluations with classical chess algorithms such as Zobrist hashing and quiescence search.
- Explored the impact of hybrid techniques on search efficiency and game-playing performance.

Technical Skills

Languages: Rust, Go, Python, C, C++, Shell Script, Dart, Typescript, JavaScript
Frameworks: Flutter, React, NextJS, OpenGL, GraphQL
Tools: Kubernetes, Docker, AWS, Firebase, Linux, Git, Terraform, CI/CD Pipelines
Concepts: Distributed Systems, Computer Graphics, Web Development, Cloud Infrastructure, DevOps Practices