OMKAR BHOR

Pune, MH — P: +91 83297 43213 — omkar@bhor.online — GitHub — LinkedIn — Portfolio

EDUCATION

B.Tech in Computer Engineering 2023 – 2027
Nutan College of Engineering and Research, Pune
Higher Secondary Education (Science – Computer Science) 2021 – 2023
Dr. D. Y. Patil College of Computer & Business Studies, Pune
Relevant Coursework: Algorithms, Operating Systems, Computer Networks, Database Systems, Computer Architecture, Machine Learning, Compilers

WORK EXPERIENCE

Ask My Vault – Open-Source Obsidian Plugin
Open Source Contributor

- Contributed to a local-first RAG system enabling semantic querying of Markdown notes with grounded answers and file-level citations inside Obsidian.
- Designed incremental embedding and retrieval pipelines using sentence-transformers (MiniLM), ChromaDB, FastAPI, and multi-provider LLM integrations.

PROJECTS

Swaraj – Marathi-based Programming Language

- Built a C-style programming language with Marathi keywords using a hand-written lexer, recursive descent parser, and AST-based interpreter in Rust.
- Added dynamic typing, first-class functions, control flow, and lists, achieving ∼200ms cold start and microsecond-level expression evaluation.

AnuGPT – GPT Implementation in C++ & CUDA

- Built a from-scratch GPT-style transformer in pure C++ and CUDA, covering both training and inference without ML frameworks.
- Trained a ∼10M parameter model locally, achieving ∼45 tokens/sec inference.

Barter – Offline Peer-to-Peer Payment System

- Built an offline peer-to-peer payment system enabling wallet-to-wallet transfers over local networks without servers or internet connectivity.
- Engineered concurrent networking and cryptographic primitives (Ed25519 identities, signed transactions, hash-chained local ledger) using Go.

Pokénator – Akinator inspired Pokémon Guessing Engine

- Built an information-theoretic guessing engine selecting questions using entropy and information gain.
- Modeled unordered, noisy attributes to compute optimal questions dynamically at runtime.

ACTIVITIES

Computer Engineering Students Association (CESA)
Member
Meta Coders Club
Member

- Participated in Smart India Hackathon (2 times); selected at internal/inter-college evaluation stage
- Secured 4th place at ANVESHANA Hackathon held at NMIET, Pune

SKILLS

Languages: C, C++, Java, Rust, Go, Python, CUDA, JavaScript, TypeScript
Platforms & Tools: Linux (Arch Linux, 4+ years daily use), Windows, macOS, Git, Docker, Bash, Zsh, Make
Certifications:

- CS50's Introduction to AI (Harvard)
- Oracle OCI 2025 AI Foundations Associate
- Accelerated Computing in CUDA C/C++
- Ubuntu Linux Professional Certificate (Canonical)
- Docker Foundations Professional Certificate

Problem Solving: Solved 300 DSA problems across Codeforces, LeetCode, and CSES (CF Rating ∼1350)