

Harsh Devisha

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EDUCATION

Loyola Marymount University - 3.9/4.0

Master of Science in Computer Science

Los Angeles, CA

January 2024 – December 2025

Pandit Deendayal Petroleum University

Bachelor of Technology in Electrical Engineering

Gandhinagar, GJ

June 2017 – June 2021

RELEVANT COURSEWORK

Core Systems: Operating Systems, Distributed Systems, Computer Networks, Database Management Systems

Advanced Computing: Compiler Construction, Advanced Algorithms, Theory of Computation

Specialized: Network Programming, Parallel Computing, System Security

EXPERIENCE

Graduate Research Assistant

August 2025 – Present

Kubishi | LMU Seaver School of Science and Engineering

Los Angeles, CA

- Analyzed the mathematics of a variant of pure-pursuit problem with potential failure.
- Analyzed the online and optimal-offline strategies for competitive ratio and proved the worst-case failure scenario.
- Used Python for simulation and Mathematica to verify proof rigour

Software Engineer

December 2024 – May 2025

SetFindr

Los Angeles, CA

- Implmented JWT authentication and RESTful APIs using Python FastAPI and Node.js.
- Implemented vector search using Qdrant achieving sub-100ms query latency on 10K+ embeddings.
- Integrated Google Cloud APIs for OAuth2 authentication and geospatial features.
- Built unstructured-document processing pipelines using OpenAI API for search and recommendation.

Data Specialist

August 2024 – May 2025

LMU Career and Professional Development Department

Los Angeles, CA

- Built ETL pipelines to handle daily appointment and engagement datasets.
- Identified engagement patterns, contributing to a 200% increase in participation from under-represented demographics.

Software Engineer - I

December 2021 – December 2023

Nexuslink Services

Ahmedabad, GJ

- Automated complex document generation using headless browser (Puppeteer), saving over 100 operational hours monthly.
- Created standardized API client abstraction with centralized error handling and retry logic, reducing boilerplate by 50+ LOC per endpoint.
- Implemented authentication utilizing JWT with session management and refresh token rotation.

PROJECTS

Zue (Distributed Log) | Zig

[github](#)

- Built distributed storage engine in Zig implementing Raft-like consensus with quorum-based replication, automatic leader-driven log repair, and ISR tracking.
- Implemented log-structured storage with segmented append-only architecture and sparse indexing, maintaining O(1) write complexity.
- Implemented non-blocking event-loop to handle client requests, replication and background repair.
- Designed and Implemented Binary Serialization Format for communication between nodes.

Sparrow Language Interpreter | Java, Compiler Design

[github](#)

- Built interpreter for instruction-based DSL with lexer, parser, and runtime engine.
- Implemented recursive descent parser for typechecking and AST generation and used visitor pattern for runtime execution.

TECHNICAL SKILLS

Programming Languages: C++ , Python, Rust, Java, JavaScript/TypeScript, Go, OCaml

Backend: Node.js, FastAPI, RESTful APIs

Cloud Platforms: AWS (EC2, S3), Google Cloud (Maps API, OAuth2)

Databases: PostgreSQL, MongoDB, Redis, Qdrant (Vector DB)

Project Management: Jira, Click-Up, Scrum, Agile