MANAY LODHA

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WORK EXPERIENCE

Fullstack Software Engineer May 2025 - Present
Heartland Center

- Developed a full-stack time-tracking application using React, Expo, and TailwindCSS with a PocketBase backend, replacing a manual Excel-based workflow and reducing weekly time entry effort by 60% across the team.
- Owned the product experience end-to-end, making design and UX decisions around edge cases like overlapping entries, timezone normalization, and tracking, resulting in a 40% decrease in timesheet errors compared to the previous spreadsheet process.
- Performed rigorous self-QA across the stack, validating calculation accuracy in time summaries and reports to ensure data reliability and prevent the trust-eroding discrepancies common in the old manual workflow.
- Wrote clean, readable code with a focus on simplicity and maintainability, implementing complex SQL queries to power reporting dashboards and project-level analytics that previously required hours of manual Excel formula work.

Software Engineering Intern (Fullstack) September 2024 - April 2025
Poshdecor

- Built and deployed full-stack applications using React, Node.js, and Python, improving system performance by 30% through clean API design and scalable architecture.
- Designed and optimized SQL-based data workflows, integrating AWS, Docker, and Kubernetes to handle over 1M data transactions daily across distributed systems.
- Built an end-to-end RFP automation pipeline using MongoDB, Python, and ChatGPT API that processed 80% more proposals per quarter and cut qualification analysis time in half.
- Built **8** reusable **Pandas**/**PySpark** pipelines processing **28M+** rows; reduced report runtime by ∼**70%**.

Engineering Intern May 2024 - August 2024
Lear Corp.

- Architected end-to-end asset-tracking systems spanning RFID, BLE, and computer vision, driving multi-layer wireless stack decisions across large-scale deployments.
- Miniaturized multi-sensor hardware through low-power design and optimization, achieving 3-year battery life while integrating seamlessly and safely into production assets.
- Led hardware–software co-design across cross-functional teams from prototyping through deployment, owning the full feature lifecycle and maintaining quality over multiple years.

Co-Founder / CTO March 2022 - May 2024
beSportly

- Launched a two-sided booking platform connecting over **460** venues with athletes; facilitated **400+** bookings.
- Built a single **Flutter** codebase for **Android & iOS**; Collaborated with team to bring designs to life in Figma.
- Implemented the backend using Firebase as a NoSQL server, ensuring efficient and quick data handling.

TECHNICAL SKILLS

Languages: Python, Java, C, SQL, Dart, HTML/CSS, JavaScript, TypeScript
Frameworks & Tools: Node.js, React, Flutter, Firebase, MongoDB, AWS, Docker, Git, Cloudflare, Postgres, Tailwind CSS

EDUCATION

The Pennsylvania State University, August 2021 – August 2025
Bachelor of Science in Computer Engineering

Coursework: Object-Oriented Programming, Data Structures & Algorithms, Machine Learning, Systems Engineering, Data Analysis, Vectortization, Distributed Systems, Computer Vision, Robotics

PROJECT EXPERIENCE

JBOD Firmware Controller

- Wrote low-level firmware in C for a JBOD storage system, implementing disk caching, seek optimization, sequential read/write operations, and garbage cleanup routines that improved I/O throughput by 3x.
- Developed a network access layer enabling remote JBOD management over TCP, with command parsing, error handling, and concurrent request support via multithreading.

WhisperAI Local Subtitle Generator

- Deployed OpenAI Whisper on a local home-lab server with NVIDIA GPU accelerated via CUDA, building an end-to-end Python pipeline for automated subtitle generation with 95%+ transcription accuracy on multilingual media files.
- Optimized inference and batch decoding on CUDA, reducing transcription latency by 60% compared to CPU-only execution.

Gear Mesh Pattern Analysis

- Trained a YOLO-based CV model on **7,500** labeled images achieving **88%** mAP@0.5; increased defect detection by **80%** and reduced false negatives by **21%**.