ANSHUL KAMBLE

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EDUCATION

Bachelor of Science in Computer Science, Minor in Data Science **Expected: May 2026**
Arizona State University - Tempe GPA: 4.00/4.00
Coursework: Machine Learning, Foundations of AI, Operating Systems, Data Structures & Algorithms, CyberSecurity, Networks

TECHNICAL SKILLS

- **Programming Languages**: Python (Advanced), TypeScript, C, C++, Java, JavaScript, SQL, Networks (TCP/IP), Linux
- **Framework & Libraries**: Polars (Rust), Next.js, React, PyTorch, Node.js, Sci-kit, Pandas, Matplotlib, Seaborn, Streamlit
- **Databases**: MySQL, SQLite, DuckDB, PostgreSQL, Mongo, NoSQL - DynamoDB
- **Tools & Technologies**: GitHub, git, Linux, Pixi, Jira, JUnit, OpenAI APIs, RStudio, Vercel

EXPERIENCE

Database Engineering Intern | NREL, US Dept. of Energy - Remote, CO 01/2025 - 12/2025
- Designed a Python backend model **integrating LLMs** into an Energy Language Model supporting 3,000+ electric data sources
- Built scalable **ETL** pipelines processing 20,000+ records using PyTorch, DuckDB, **Rust** & **Pandas**, ingesting real-time updates via **REST APIs** while consistently working with national researchers
- Formulated Python scripts to perform **complex rule-based** computations at scale, eliminating manual workflows and **turnaround time** from 3 hours to 75 mins per utility
- Ensured maintainable, production-ready code using **GitHub**, with code reviews & consistent updates using **Agile sprints**
- Debugged **distributed backend services** in Linux environments using **GDB**, logging, indexing, and system-level analysis

Backend Software Engineering Intern | Qualaces Inc, JobQue.AI - Remote, AZ 08/2025 - 04/2026
- Coded a Python-based **automation** system, retrieving career page URLs from job-posting URLs using **rule-based parsing in** ATS interfaces like Workday, Lever, reducing **false-negative** outcomes & failed retrievals by 98%
- Designed & operated a **referral** and **promo code system** with 100% functionality using **Stripe** APIs, implementing webhook validation, idempotent event handling & retry logic
- Established multithreaded extraction by **ThreadPoolExecutor**, caching, & retry logic, optimizing the current repo by 53%
- Built backend workflows with **AWS** services (Lambda, DynamoDB) and **CI/CD** pipelines (**GitHub Actions**) on a non-main repo first to safely deploy and validate changes, improving merge conflicts by 95%

Program Operations Intern | EECPLL, W.P. Carey School of Business - Tempe, AZ 07/2024 - 12/2024
- Automated grade calculations of employee learners using **VBA & Excel scripts**, reducing report time by 45 mins per course
- Supported **cross-functional** projects with Starbucks, AmEx, Mayo Clinic, and reported the colab's HubSpot KPIs to leadership
- Aggregated engagement data of 400 learners from Canvas LMS in **Tableau dashboards** for statistic-based business decisions

Oxygen Data Volunteer | CoviO2 Foundation - Remote, India 07/2021 - 09/2021
- Designed **MySQL Databases** from large-scale Healthcare datasets for Oxygen Supply Chain during COVID in 5 metro cities
- Reconciled daily updates for 150 people about oxygen cylinders using database **standardization**, **normalization**, & **indexing**

PROJECTS

SunDevil EBAY - eCommerce platform | Next.js, TypeScript, PostgreSQL, Vercel (link) 05/2025 - 07/2025
- Built a **full-stack e-commerce** platform using Next.js, TypeScript, and PostgreSQL to manage users, listings, and transactions
- Implemented a server-first architecture with React Server Components and Server Actions, reducing client-side JavaScript by ~30% using code refactoring by **Claude & Cursor**
- Designed and maintained a **relational database schema** to manage users, inventory, and transactional integrity, utilizing complex relations and transactions
- Devised **role-based dashboards** (Admin, Buyer & Seller) with real-time analytics and negotiation tracking, and Vercel deployment, ensuring high availability and seamless mobile responsiveness

Rainfall Analysis ML Model | Python, PyTorch, scikit-learn, Scipy, Seaborn (link) 02/2025 - 02/2025
- Built an end-to-end ML pipeline to predict daily rainfall in Arizona using 25 years of data, following the ML cycle from wrangling, aggregation, to f**eature engineering** through **supervised learning & clustering**
- Generated **multiple regression models** (baseline, multi-feature, forward-selected), using cross-validation and metrics (R^2, RMSE, MAE) to evaluate accuracy and model complexity

Operating System Kernel | C++, C, Linux, Ubuntu, Python, ASM (x86_64) (link) 02/2025 - 04/2025
- Built an OS kernel with **virtual memory management**, ELF execution, and multicore support on x86_64, implementing paging, **Round-Robin scheduler**, locks, mutexes, and syscalls for user-space programs
- Built a multithreaded kernel software using **semaphores** and **synchronization** primitives, and built a virtual memory allocator by walking multi-level **page tables** and mapping physical pages