

# Saksham Garg

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## EDUCATION

### University of Wisconsin - Madison

Madison, WI

Master of Science, Computer Science - [GPA: 4.0]

Aug 2025 - May 2027

(Coursework: Big Data Systems, Operating Systems, Machine Learning, Foundation Models)

### Indian Institute of Technology (IIT), Roorkee

Uttarakhand, India

Bachelor's, Electronics Engineering (ECE) - [GPA: 3.86]

July 2019 - May 2023

(Coursework: OOP (A), Computer Architecture (A), Data Structures (AB), Algorithms (A), Computer Networks (A))

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## TECHNICAL SKILLS

**Programming Languages:** C/C++, Python, JavaScript/TypeScript, Java, SQL, HTML, CSS

**Technologies/Frameworks:** REST, gRPC, React, NextJS, PostgreSQL, Cassandra, FastAPI, Kafka, Spark, Hadoop, PyTorch, AWS, GCP

**Developer Tools:** Git/GitHub, Vim, Bash/Zsh, Docker, Linux/Unix, Postman, Jenkins (CI/CD), SQL Developer, Claude, Cursor

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## WORK EXPERIENCE

### Oracle

Hyderabad, India

#### Applications Developer

July 2023 - Aug 2025

- Implemented end-to-end features across Oracle's ERP manufacturing suite as part of a **platform-wide UI/UX migration**
- Developed 10+ **MVVM-based pages** in Oracle JET (Knockout.js) with **role-based access controls** and client-side caching, onboarding **550+ new enterprise customers**
- **Built and optimized REST services and SQL queries** in Java EE handling **10M+ daily transactions**, reducing **API response latency by ~20%** through indexing, query restructuring, and server-side validations
- Embedded **Oracle AI Agent Studio workflows** into transactional pages, **enabling contextual AI recommendations** for operators and engineers across the platform

### Oracle

Bangalore, India

#### Software Engineering Intern

May 2022 - July 2022

- Built a **Python-based command-line tool** to generate standardized **Flask/Django/FastAPI project scaffolds** using Cookiecutter, enabling 50+ internal developers to **quickly spin up production-ready projects**
  - **Automated virtual environment creation** and dependency installation, **reducing onboarding time by 50%**
  - Added **PostgreSQL integration**, allowing users to manage database connections with minimal configuration
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## PROJECTS

### Wsh - Walter Shell | [GitHub](#)

- Built a **custom UNIX-style shell in C** with **interactive + batch modes**, robust parsing, and **proper memory management**
- Added **external command execution**, **PATH resolution**, & a full suite of **built-ins including cd, which, & history**
- Implemented **pipelining for Unix-style multi-command chaining** with proper file descriptor management

### SynthShield - Differentially Private Synthetic Data | [GitHub](#) | [Demo](#)

- Built **full-stack synthetic data generator** with Next.js, Tailwind CSS, FastAPI, and **deployed to Google Cloud Run**
- **Fine-tuned T5-small** (60M params) via Opacus (DP-SGD) achieving a formal ( $\epsilon=4$ ) differential privacy guarantee
- Implemented **per-column KL divergence analysis**, **side-by-side privacy record lookup**, and downloadable PDF certificate

### DeepMind Contests Analytics | [GitHub](#)

- Built a **Dockerized Spark + HDFS cluster** with Hive warehouse and modeled the CodeContests dataset into relational tables
  - Performed analytics using **Spark DataFrame and SQL APIs**, optimizing workloads via bucketing, caching, and plan inspection
  - Trained a **Distributed Decision Tree model** using PySpark's PLANET algorithm to **predict missing Codeforces difficulty ratings**
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## ACHIEVEMENTS AND EXTRACURRICULAR

- **Two-time Asia-West ACM-ICPC Regionalist** (2021 & 2022)
- **Maximum Rating of 1924** (Candidate Master) on Codeforces (Top 5%)
- **Ranked 90th globally in Google Kick Start Round C, 2022**