Shivli Agrawal

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Education

Purdue University Jan 2022 – Dec 2025
Bachelor of Science, Computer Science *West Lafayette, IN*
- Dean's List: 2022-2023

Professional Experience

AI Solutions Engineer Dec 2025 – Present
Cummins Inc., Power Systems Business Unit *Minneapolis, MN*
- Collaborate with cross-functional teams to translate business requirements into scalable analytics tools and dashboard
- Implement AI/NLP workflows to analyse unstructured sales to identify recurring problems and build solution tools.
- Produce technical documentation and user stories for enterprise data tools.

AI Analytics Intern June 2025 – Aug 2025
Cummins Inc., Power Systems Business Unit *Minneapolis, MN*
- **Developed and executed** automated **test frameworks** in **Databricks** (PySpark, MLflow) to validate ETL pipelines on **Salesforce CPQ** data, ensuring consistency across >5,000 opportunities.
- **Built and fine-tuned** a domain-specific **LLM** with Hugging Face Transformers that generated **smoke-test suites**, reducing QA prep time by **90%** and improving regression coverage.
- **Engineered and tested** an **Outlook phishing-detection add-in** (Office.js, Microsoft Graph API, Node.js), achieving **99% classification accuracy** in pilots and integrating real-time alerts via Databricks microservice.
- Collaborated with QA and DevOps teams to integrate automated tests into CI/CD pipelines, streamlining releases on **AWS**-hosted environments.

Undergraduate Teaching Assistant (7 terms) Aug 2022 – Dec 2025
Purdue University, Object Oriented Programming with JAVA — Prof. Dunsmore *West Lafayette, IN*
- Supervise lab sessions for **80+ students**, enhancing proficiency in Java and OOP concepts.
- Debug assignments, provide detailed feedback, and maintain accurate records over **3 years**.

Projects

Nocturnè Marketplace | MERN, JWT, Cloudflare Feb 2025
- Built a **dynamic e-commerce platform** with category navigation, JWT auth, and real-time search filtering.
- Optimized API latency with **Cloudflare Workers**; enhanced UI with **CSS Grid**, Flexbox, and animations.
- Integrated **PostgreSQL** queries into reporting modules to validate data integrity and reliability.

System Monitor | C, GTK, Linux /proc Nov 2024
- Developed a **GTK** desktop app to monitor CPU, memory, and processes via **/proc** filesystem.
- Implemented process-management controls, automated performance checks, and real-time visualization.

BoilerTutors | React, Node, PostgreSQL, REST Sep 2024
- Created a full-stack resource-sharing platform with **React.js** and **Node.js**.
- Designed robust REST APIs and schema in **PostgreSQL**, applying indexing and query optimization for scalability.
- Integrated backend unit tests to validate scheduling and resource-matching algorithms.

Salesforce CPQ Win/Loss Analytics | Databricks, PySpark, MLflow, Salesforce API Aug 2025
- End-to-end pipeline that predicted opportunity outcomes and surfaced trends using **gradient boosting** and **LLM**-based pattern mining.
- Added automated regression tests to validate MLflow model outputs against production benchmarks.

AI-Generated Smoke Test Suite | HuggingFace, PyTorch, Transformers Aug 2025
- Custom LLM fine-tuned on historical CPQ deployments to auto-generate **smoke-test scenarios**, boosting coverage by **30%**.
- Packaged testing scripts into reusable modules integrated with CI/CD.

Technical Skills

- **Languages**: Java, C, C++, Python, R, JavaScript, TypeScript, SQL
- **Frameworks & Tools**: React.js, Node.js, Express.js, PyTorch, HuggingFace, Databricks, MongoDB, MySQL, **PostgreSQL**, MLflow, Figma, Pandas
- **Technologies**: Machine Learning, Test Automation, Large Language Models, Natural Language Processing, DevOps, Cloudflare Workers, **AWS**, Azure, REST, GraphQL, High-Performance Computing
- **Others**: Data Structures and Algorithms, Object-Oriented Programming, Git, Agile, Software Testing, Linux, Shell Scripting, Systems Programming

Leadership Positions

President Aug 2023 – Dec 2025
UR Global, Purdue University *West Lafayette, IN*
- Lead cross-cultural events and foster a welcoming environment for international students, enhancing global awareness on campus.