RUPAL JAIN

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EDUCATION

Master of Science in Computer Science | The University of Arizona, Tucson, AZ, USA | GPA: 3.63 *(Aug 2022 - May 2024)*
- **Specialization:** Software Engineering, Full Stack, Data Structures, Algorithms, Object-Oriented, Cloud computing

Bachelor of Technology in Computer Science Engineering | GGSIPU, Delhi, India | Grade: 8.64 *(Aug 2015 - May 2019)*

SKILLS

Languages: Python, C++, C, Java; Scripting | **Web Development:** JavaScript, Node.js, R, HTML, CSS, D3.js, React.js
Databases: Relational DBMS, NoSQL, CRUD; MySQL, Oracle PL/SQL, PostgreSQL, MongoDB, ETL, Data Migrations
Cloud services: AWS (Lambda, CloudWatch), GCP **| APIs/Frameworks:** Flask, Django, jQuery, Express.js, Spring Boot, RESTful API
DevOps & Containerization: Docker, Kubernetes, CI/CD, Jenkins, Git, GitLab | **OS:** Linux, Windows, iOS | **Agile**
Analytical and Problem-Solving Skills: Troubleshooting, Debugger, Adaptive, Self-Starter, Strong Communication, Team Player

EXPERIENCE

Software Developer Intern | Resilient Software Security | Remote *(Jun 2024 - Present)*
- Implementing telemetry systems using CloudWatch to monitor user interactions, provide real-time application usage patterns.

(May 2023 - Aug 2023)
- Automation of client's software security analysis report generation, reducing manual processing time from a week to a few seconds
- Deployed a report generation algorithm on AWS Lambda function using Docker container images for seamless deployment
- **Technologies: AWS Lambda, S3, CloudWatch RUM, EC2, GCP (Google API), JavaScript, Docker, JotForm API, Webhooks**

Software Developer | Tata Consultancy Services | Mumbai, India *(July 2019 - July 2022)*
- Optimized extensive PL/SQL queries, achieving a **50%** reduction in run-time cost. Conducted GDPR Audit for the project
- Conducted database system migration from SAP ECC to SAP S/4 HANA version in SQL for faster processing, real-time analytics
- Revamped legacy code mapping (ER) in Informatica, migrated technical metadata to stored procedures, adhering to Agile practices
- Developed an API for autocomplete functionality using Spring Boot, with server-side validation for forms.
- **Technologies: Oracle PL/SQL, Java (Development & Support), Spring boot, GitLab, CI/CD, Jenkins pipelines**

Software Developer Intern | Utopian Dreams Pvt. | New Delhi, India *(May 2018 - Aug 2018)*
- Developed a web page with Maps and statistical charts, reducing growth analysis time by **60%** for faster-informed decision-making
- Added CSV Export/Import feature in FinTech platform, using Node, XLSX library, improved productivity of users by **50%**
- **Technologies: JavaScript, Node.js, HTML, CSS, PostgreSQL, jQuery, Google APIs, Express.js, Highcharts API**

PROJECTS

Distributed Trading System – Java, Spring Boot, gRPC [GitHub] *(Oct 2024)*
- Built a containerized microservices-driven stock trading platform, used Java's Concurrency API thread pools, atomic synchronization to low latency, data consistency, and safe concurrency, integrated gRPC and SSE for live processing and performance monitoring

EdiLite Text Editor – C++, Linux, Ubuntu [GitHub] *(Oct 2024)*
- Developed a text editor from scratch with core features like search, navigation, status bar, line numbers, and keyword highlighting
- Focused on terminal input handling, raw mode processing, and efficient file operations like creation, editing, and saving to disk

Badminton Tournament Management System for UA – Python [GitHub] *(Apr 2023)*
- UX design for Customer front-end Dashboard using HTML/CSS and Flask for player registration and match assignment.
- Integrated PostgreSQL with Amazon RDS on EC2 instance and conducted unit and integration testing with Pytest, following the Software Development Lifecycle (SDLC) with detailed Architecture Reports at every iteration of product management, development

Data Visualization Projects – Python, JavaScript [GitHub, Demo] [GitHub] *(Apr 2023)*
- Represented complex datasets using treemaps, volume rendering (VTK library), and vector field visualization using D3.js in JavaScript
- Built Graphical user Interface (GUI) using PyQT5, CV2 for image compression, QtGraph, matplotlib for plots, Pandas lib in Python

AI Detecting Hate Speech Words in Tweets – Neural Network with Lucene (Java, Python) [GitHub] *(Apr 2023)*
- Fine-tuned BERTweet model and optimized hyperparameters for diverse datasets. Improved f1-score compared to the original model
- Used NumPy, and Pandas for data processing. Pytorch for GPU config, Fetched tweets using Twitter4J API with Lexicon approach

Volunteered for Girls Who Code @UA: Teaching Python programming language to middle-school girls *(Aug 2023 - May 2024)*

Graduate Teaching Assistantship @UA: Software Engineering, Cloud Computing, Web Development *(Aug 2023 - May 2024)*

CERTIFICATIONS

Google Cloud Computing Foundations Certificate [Certificate] *(Aug 2024)*