RUPAL JAIN

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EDUCATION

Master of Science, Computer Science, The University of Arizona, Tucson, USA　　　　Aug 2022 – **May 2024**
AI/ML, Visualization, Text Retrieval, Computer Security, Algorithm, DBMS, Software Engineering, Networking; **GPA: 3.55**

Bachelor of Technology, Computer Science, GGSIPU, Delhi, India, **Grade: 8.64**　　　Aug 2015 – May 2019

TECHNICAL SKILLS

Programming Languages: C++/C, Python, Java, R; | **Web Development:** JavaScript, Node.js, HTML/CSS
Databases: MySQL, Oracle PL/SQL, Informatica, Teradata, MongoDB, Firebase, PostgreSQL
Frameworks: jQuery, express.js, Bootstrap, Flask, D3, RESTApi; | **Cloud services:** AWS Lambda, S3, Google Cloud Platform
Tools: JotForm, Docker, JSON, GIT, GitLab, Dialogflow, Putty, Agile, Jira, Confluence, Jenkins

EXPERIENCE

Full-Stack & AI Software Developer Intern　　　　　　　　　　　　　　　　　　　　May 2023 – Aug 2023
Resilient Software Security, Phoenix, AZ, USA
- Automated security analysis report generation to eliminate manual work using Cloud deployment resulting in 98% faster processing, integrating JotForm API, AWS Lambda, ECR for data storage, and AWS Secret manager using JS.
- Deployed report generation algorithm on AWS Lambda function using Docker container images to enhance efficiency

Software Developer　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　July 2019 - July 2022
Tata Consultancy Services, Mumbai, India
- Led TCS BA Hiring application development, enhancing, and implemented features using Maven, Java
- Optimized extensive SQL queries, achieving a 60% performance improvement by reducing their run-time cost.
- Conducted database system migration from SAP ECC to SAP S/4 HANA version, realizing a 70% efficiency increase
- Revamped legacy code mapping in Informatica, capturing technical metadata to migrate to stored procedures, improving Business objects reports performance, followed Agile practices

Software Developer Intern　　　　　　　　　　　　　　　　　　　　　　　　　　　June 2018 - Aug 2018
Utopian Dreams Pvt., New Delhi, India
- Developed Export/Import functionality in an online platform, DistrictD, using Node-xlsx, XLSX JavaScript library
- Created charts using Highcharts API for data visualization and added Location functionality using Google Maps API

PROJECTS

Security Assessment Report | Internship @Resilient Software Security　　　　　　　　　　　Apr 2023
- Decoded JotForm multipart responses to a specified JSON format accepted by AWS Lambda HTTP API gateway
- Integrated Google API to enable report email alert to customer, employed GitHub Actions for streamlined deployment

"ToMCAT Offline Viz", Adv. Data Visualization | GitHub　　　　　　　　　　　　　　　　Apr 2023
- A multimodal tool developed to visualize human physiological data like fNIRS, EEG, eye tracking (Python)

"Hate Speech Detection in Tweets", Text Retrieval | GitHub　　　　　　　　　　　　　　　Apr 2023
- Built an AI application combining Neural Networks and Traditional text retrieval methods using Lucene library (Java)
- Executed model training with the BERTweet model, fine-tuning on diverse datasets, and optimizing hyperparameters

"UA Badminton Tournament", Software Engineering | GitHub　　　　　　　　　　　　　　　Apr 2023
- Built a software to automate Tournament Management (Registration, Match Tracking, etc) using Flask, Agile (Python)

Data Visualization Techniques | GitHub　　　　　　　　　　　　　　　　　　　　　　　Apr 2023
- Created interactive visualizations to represent complex data sets and facilitate data-driven insights using d3.js (JS)

"Security Analysis of Cryptocurrency Exchanges", Computer Security | GitHub　　　　　　　Dec 2022
- Analyzed major security breaches of top 4 cryptocurrency exchange, used Cryptoguard to detect crypto vulnerabilities

Artificial Intelligence Chatbot – Student Support System | GitHub　　　　　　　　　　　　Apr 2019
- Build an AI chatbot to assist student queries using Dialogflow, GCP, Firebase Real-time database (JavaScript, Node.js)

Rubik Solver | GitHub　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Dec 2017
- Implemented Rubik's cube algorithm and an interactive version with user specific moves to solve the cube (C++)

Rolling Dice – Board Game | GitHub　　　　　　　　　　　　　　　　　　　　　　　　Dec 2017
- Built an enhanced version of snakes and ladder game using graphics library with user interactive interface (C++)

PUBLICATIONS & OPEN-SOURCE CONTRIBUTIONS

- Presented existing ML paper on "Contextual Combinatorial Cascading Bandits" | Link　　　Nov 2023
- Published: "Importance of Machine Learning in the Growth of Twitter", IJRASET, April 2019 | Link　Apr 2019
- Teaching Assistant: "Cloud Computing", "Web Dev & Internet of Things" in CSC/ECE dept. at UofA　2023 - Present
- Teaching Python Programming to middle school girls as part of "Girls who code" initiative at UofA　2023 - Present