RUPAL JAIN

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EDUCATION

Master of Science, Computer Science, The University of Arizona, Tucson, USA   Aug 2022 – **May 2024**
Artificial Intelligence, Data Visualization, Text Retrieval and Web Search, Computer Security, Algorithm, DBMS, Software Engineering, Principles of Networking

Bachelor of Technology, Computer Science, GGSIPU, Delhi, India   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

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, integrating JotForm API, AWS Lambda, S3 bucket, ECR for data storage, and AWS Secret manager using JavaScript ES Module.
- Deployed report generation algorithm on AWS Lambda function using Docker container images to enhance efficiency
- Created comprehensive documentation for the entire application developed during internship

Software Developer   July 2019 - July 2022
Tata Consultancy Services, Mumbai, India
- Led application development, optimizing SQL queries for improved performance, implementing features using Java
- Conducted migration of the database system from SAP ECC to SAP S/4 HANA version using Agile practices
- Simplified legacy code mapping in Informatica, capturing technical metadata to migrate to stored procedures, improving Business objects reports performance

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 Project | 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 Project | 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

Software Engineering Project | GitHub   Apr 2023
- "Tournament Management Software for UA Badminton Club", built an application 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)

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

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

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