YUG DEEPAK RAJANI

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EDUCATION

NORTHEASTERN UNIVERSITY — **Boston, MA, United States**
Candidate for Master of Science in Computer Science — **Jan 2023 - Dec 2024**
Khoury College of Computer Sciences — **GPA: 4.0 / 4.0**
Relevant coursework: Program Design Paradigms, Algorithms, Database Management Systems, Cloud Computing (AWS)

DHARMSINH DESAI UNIVERSITY — **Nadiad, Gujarat, India**
Bachelor of Technology in Computer Engineering — **Jun 2017 - May 2021**
Faculty of Technology — **GPA: 4.0 / 4.0**

TECHNICAL SKILLS

Fundamental Concepts: Design Patterns, Data Structures and Algorithms, Operating Systems, OOP Concepts
Programming Languages: Python, Java, JavaScript, Golang, C++, C#, C, SQL
Web Technologies: React.js, Angular, Node.js, Express.js, GraphQL, AJAX, Redux, Flutter, HTML, CSS, Bootstrap
Databases: MySQL, PostgreSQL, MongoDB, SQLite, Elasticsearch, Firebase, Google Cloud's BigQuery
Tools and Frameworks: Elasticsearch, Logstash, Kibana, Splunk, Keras, Tensorflow, NLTK, AWS, Jira, Docker, Cypress

PROFESSIONAL EXPERIENCE

Northeastern University — **Boston, MA, United States**

Graduate Teaching Assistant | *Database Management Systems, MySQL, Java, Python* — **May 2023 - Present**
- Evaluating a class of over 200 students in constructing and troubleshooting solutions in **Database Design** (CS 3200) and **Database Management Systems** (CS 5200), incorporating **MySQL**, **MongoDB**, and practical applications.
- Crafted a hands-on assignment on **MongoDB** filters, enhancing students' practical skills in querying data efficiently.

Graduate Research Assistant | *Python, Shell Scripting, Linux* — **May 2023 - Aug 2023**
- Spearheaded collaborative **5G mm wave analysis**, developing visual insights through rigorous measurements.
- Co-authored forthcoming research paper, outlining **wireless networking** applications and **data analysis** techniques.

Crest Data Systems — **Ahmedabad, Gujarat, India**

Software Engineer | *Python (FastAPI), React, Docker, Elasticsearch, Kibana* — **May 2021 - Oct 2022**
- Leveraged **Python** and **React** in cross-functional collaboration to engineer full-stack features for Cisco Insight Hub.
- Orchestrated the **Docker** deployment strategy, decreasing the deployment time from 30 minutes to 5 minutes.
- Optimized Cisco SD-WAN report generation using **Python FastAPI** async/await for 2+ concurrent user actions.
- Contributed to **Open Source** with 10+ **Elasticsearch** integrations and Beats modules for **Security** and **Observability**.
- Led and mentored onboarding of 6 interns in **Elasticsearch**, providing hands-on training and guiding their projects.

Software Engineer Intern | *Python (Flask), Splunk, PostgreSQL* — **Dec 2020 - May 2021**
- Utilized **Python** to add support for migrating visualizations, alerts, and saved searches from **Elasticsearch** to **Splunk**.
- Automated verification of ingested data into visualizations using **Selenium**, cutting testing time by more than 80%.
- Coordinated with 5+ developers to develop Pagerduty and Slack alert migration functionality using **Python**.
- Created **RESTful APIs**, performed integration and unit testing using **PyTest**, achieving 10% higher test coverage.

PROJECTS

Fake Stack Overflow | *MongoDB, Express.js, React.js, Node.js, HTML, CSS, JavaScript* — **Oct 2023 - Dec 2023**
- Created a scalable Q&A app with **React**, **Node.js**, **MongoDB**, achieving a 30% reduction in page load times.
- Implemented comprehensive **Cypress** tests, resulting in a 20% decrease in bugs, ensuring a robust user experience.

Visual Image Manipulation and Enhancement | *Java, JavaFX, Swing, Object Oriented Design* — **Mar 2023 - Apr 2023**
- Constructed a robust **Java** system with **Swing** UI, **SOLID** principles, design patterns, achieving 50% code mitigation.
- Tested end-to-end flow using **Test Driven Development** to ensure intended behavior with >80% test coverage.

Speech Recognition and Voice Detection | *Python (Django), TensorFlow (Keras), JavaScript* — **Mar 2020 - Apr 2020**
- Engineered a speaker identifier by extracting 40-dimensional MFCCs from speech frames using a **neural network**.
- Developed a **TensorFlow** model for speech recognition, attaining >95% accuracy, with an intuitive user interface.