DURGI Rajesh

Experienced *Software Engineer* with expertise in designing and architecting robust back-end systems. Proven experience in building, optimizing enterprise applications, enhancing system performance, and implementing robust security measures. Adept at bridging theoretical knowledge with practical application to deliver highly scalable systems.

Links

</> LeetCode: **drk_**
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Programming

- Python
- C/C++
- Java
- JavaScript, PHP
- SQL

Expertise

- Amazon Web Services (AWS)
- Multi-threading
- Distributed Systems
- Microservices
- Information Retrieval Systems
- Django, Flask, OpenSearch
- Docker, Jenkins, MySQL
- Artificial Intelligence
- Systems Design, Platform Development

Additional

- Cultivated deep expertise in algorithmic design, solving 900+ LeetCode challenges and achieving high rankings in competitive programming contests.

Certifications

- Natural Language Processing in TensorFlow: **DeepLearning.AI**

Experience

Genesys | *Software Engineer II* **November 2024 - Present**
- Researched and implemented optimal ElasticSearch DSL queries that increased the search accuracy of the existing system by **45%,** significantly improving the quality of initial document retrieval.
- Researched, designed, and implemented a novel query preprocessing module that resolved a long-standing noise issue in the search system, resulting in an **85%** improvement in precision and accuracy, and significantly reducing false positives in production.
- Led a comprehensive evaluation and benchmarking of large language models, optimizing for factual consistency, coherence, and relevance, directly influencing LLM selection and future AI product direction.
- Played a pivotal role in replacing a legacy keyword system with **Knowledge v3**, a scalable RAG architecture now serving the entire customer base, contributions included engineering its core components and conversational interface powered by AWS Bedrock LLMs.
- Contributed to architecture decisions by identifying true system bottlenecks and strategically reallocating optimization efforts for maximum impact and scalability.
- **Technology Stack:** Python, Flask, NRQL, DynamoDB, Amazon S3, OpenSearch, Amazon Kinesis, Terraform, CloudFormation, Amazon Lambda, Ansible, Docker, Amazon SQS, Amazon Bedrock.

Ericsson | *Software Engineer I* **July 2022 - August 2024**
- Optimized the Ericsson Charging (EC) application's **license manager** system by re-engineering the REST API interface, achieving a **90%** [10 to 1] reduction in unnecessary alerts triggered, fostering a more efficient licensing experience and high availability.
- Streamlined and automated the Ericsson's License Manager certificate renewal process, reducing operational time by **98%** [25 minutes to 5 secs], enabling frictionless communication and peak performance.
- Designed and led a project within the EC application, which effectively mitigated security vulnerabilities by implementing encryption and decryption algorithms across both node clusters and customer environments.

Ericsson | *Engineering Intern* **January 2022 - July 2022**
- Spearheaded a revamp of various legacy scripts within **RHEL7.9**, seamlessly migrating them from **Python 2 to 3**.
- Achieved a **10%** increase in system throughput through improved memory management and optimization of core libraries.

Projects

OneNote | *Python, Django REST, MySQL, REST API* **December 2021**
- Developed a task management application with user accounts and personalized task lists using Django MVT framework, MySQL database, and comprehensive REST APIs for seamless task operations.

Spam Filter | *Python, Neural Networks, TensorFlow, Keras* **March 2021**
- Developed an email spam filter using neural networks and Natural Language Processing techniques like text tokenization, sequencing, and padding, executed on Google Colab and Jupyter Notebook with TensorFlow and Keras, post **DeepLearning.AI** certification.

Education

- **B.Tech in Computer Science and Engineering** **2018 - 2022**
  - Vellore Institute Of Technology | GPA: **8.50**
- **Higher Secondary Education** **2016-2018**
  - Sri Chaitanya Junior Kalasala | Percentage: **96.2%**