Karthik Chintamani Dileep

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Education

Northeastern University **September 2022 – May 2024**
Master of Science in Computer Science *GPA: 4.0*

Dayananda Sagar University **August 2018 – May 2022**
Bachelor of Science in Computer Science *GPA: 3.5*

Technical Skills

Languages: Java, Python, C++, JavaScript, Bash / Shell scripting, SQL
Technologies/Frameworks: Spark, Kafka, pandas, Scikit-learn, Tensorflow, Keras, Machine Learning, AI, Deep Learning, ML Ops, A/B testing, Big data, Natural Language Processing (NLP), REST API, Jupyter Notebooks
DevOps: Docker, Jenkins, Kubernetes, ElasticSearch, Continuous Integration/Continuous Deployment, Git, Jira, TeamCity
Databases: SQL, MySQL, PostgreSQL, NoSQL, MongoDB, Redis
AWS Cloud: EC2, VPC, Lambda, RDS, DynamoDB, S3, Cloudwatch, IAM
Software Development: Agile Methodology, Scrum, Confluence, Collaboration, Debugging, Problem solving.

Experience

Software Engineer - Addgene | Boston, Massachusetts **May 2023 – December 2023**
- Containerized DevOps tools using Docker, Unix shell-scripting for CI/CD integration and improved development workflow.
- Engaged in cross-functional collaboration, leading code reviews to analyze requirements effectively.
- Integrated Test Driven Development methodologies (TDD) within the Software Development Life Cycle (SDLC).

Machine Learning Engineer - Research, Dayananda Sagar | Bangalore, India **August 2020 - May 2022**
- Automated clinical diagnosis for bone age determination with advanced deep learning methods, elevating patient care.
- Trained and fine-tuned deep learning ML model utilizing TensorFlow, Keras to build predictive models.
- Performed data preprocessing, cleaning, and exploratory data analysis on large datasets using Pandas, NumPy, OpenCV.
- Developed end-to-end machine learning pipelines for model training, deployment, and monitoring.
- Research published in peer reviewed journal and presented at the Springer ICAIHC conference, 2022.

Data Engineer, MARG Innovations | Sunnyvale, California **January 2020 – August 2020**
- Streamlined User Information Extraction, Validation for a fast-paced startup using Computer Vision and Microservices.
- Built an ETL pipeline to extract data from images, load it into PostgreSQL relational database and architected RESTful microservices reducing end-to-end validation time by 30%
- Uncovered Dominant topics, sentiments from user reviews through Advanced Text Analytics using NLP techniques.
- Implemented web-based dashboard to scrape and process 10,000 user reviews for visualization and analysis.

Projects

SearchXpert: Advanced Information Retrieval Toolkit | *Distributed Systems, NLP, Spark* **January 2024**
- Developed distributed web crawler and data ingestion pipeline using pySpark, Kafka, leveraging NLP, machine learning for indexing, ranking, and search engine development.
- Indexed, partitioned using PySpark, applied techniques like TF-IDF for ranking, scoring documents based on relevance.
- Orchestrated entire workflow with Airflow, defining DAGs for crawling, ingestion, processing, indexing, and search engine tasks, with real-time monitoring using Elasticsearch and Kibana.

Trader360 - Stock Portfolio Management | *Java, MVC, SOLID Principles* **January 2023**
- Developed Java app by leveraging MVC for the backend architecture and integrating real-time data via RESTful APIs.
- Implemented Object-Oriented Design (OOD) patterns like Factory, Builder and Singleton. Performed unit testing achieving 90% code coverage for a robust, scalable, and thoroughly validated application.
- Conducted A/B testing to compare different investment strategies and portfolio management techniques.

Foodie Palace - Restaurant Management Tool | *SQL, Python, Flask, JavaScript* **May 2023**
- Developed an intuitive SaaS CRM app for restaurant and designed complex relational database with CRUD operations.
- Orchestrated the seamless migration of the system to AWS cloud, leveraging services such as EC2, S3, RDS.
- Automated tasks using **events**, **triggers** resulting in 40% reduction in query response and order processing time.