DHAVAL SALWALA
Oracle Certified Professional Java Programmer

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SUMMARY
A passionate software professional with over 5+ years of experience in Enterprise Software Development using Java and python. A versatile project leader with a proven track record of resolving business challenges in an Agile environment via design thinking and effective solutions. An active Kaggle participant with a strong knowledge of machine learning algorithms and data analysis. Skilled in Java8, Python3, R and Spring Boot. Familiar with Kubernetes/Docker and ML libraries viz. NumPy, Pandas, Scikit-learn and Tensor Flow.

EDUCATION
Sep 2018 – Aug 2019   **MSc. Computer Science – Data Analytics**
National University of Ireland, Galway, Ireland

> **Result**: 1.1 (First Class Honours)
> **Modules**: Natural Language Processing, Machine Learning, Deep Learning, Data Visualization, Data Analytics – Hadoop Map-Reduce, Statistical Modelling, Game Theory, Linked Data and Knowledge Graphs.
>
> **Master's Thesis:** Evaluation of Multi-Agent Deep Reinforcement Learning algorithms
> - Central policy based on de-centralized parameter sharing in the Pursuit-Evasion environment.

June 2008 - May 2012   **Bachelor of Engineering - Information Technology**
Gujarat Technological University, Ahmedabad, India

> **Result**: 7.98/10 (First Class with Distinction)
> **Modules**: Object Oriented Programming, Data Structures, Algorithms, Operating System, Web Programming.

ACADEMIC PROJECTS:
- **Multiclass image classification**: Implemented a feed-forward neural network with backpropagation in python. All three channels were averaged into a greyscale vector of 1024 floats. The model was tested on CIFAR-10 dataset of 10 images.
- **One-shot Face Recognition:** Built a LeNet5 based deep convolutional model in Keras with a triplet loss function. The model was trained on 10,000 images of the VGG-Face dataset. It uses Euclidean distance between image embeddings to predict the image class.
- **Image Clustering:** Used pre-trained VGG16 model, chopped FC layer and fine-tuned as per dataset. Predicted embeddings were passed to K-Means clustering to form clusters.
- **Neural Machine Translation**: Used a recurrent neural network to Implement German to English translation via a decoder model with global attention – Keras.
- **Analysis of Video Games sales**: Built effective models with an accuracy of over 85% using Random Forest Classifier and Support Vector Machines to predict the likelihood of a console game to cross the 1 million mark and thereby to be a hit game.
- **Kaggle Titanic dataset**: Used feature Engineering techniques to perform cleaning and transformation. Applied stacking ensemble with XGBoost in the outer level and achieved top 6% in the Kaggle competition. Produce visualization of results in R using ggplot.

WORK EXPERIENCE
Dec 2012 – Aug 2018   **Software Developer, Tata Consultancy Services (TCS), Pune - India**
- Implemented best software practices and optimization techniques leading to > 60% increase in code efficiency.
- Worked with legal, compliance and risk management team to assess pre-trade risk measures. Thereby, achieved fluent and smooth iterative software upgrades.
- Minimized bugs and improved code efficiency via Test-Driven development using tools like JUnit and Sonar.
- Worked closely with Business Analysts in mapping the business requirement with the Physical Data Model.
- Designed business object models including tables, indexes, constraints, procedures and functions.
- Completed Lean Six Sigma and Agile Methodology training on TCS Collaborative Platform – TCS iON.

Eurex Advanced Risk Protection (ARP) – Deutsche Börse Group.
- It's a risk management interface that monitors risk exposure in real-time for Eurex Exchange T7.
- Led a team of 4 members for critical Risk Gateway delivery. Leveraged strong expertise in solving and identifying bugs while working with production support.
- Significantly reduced time-to-action latency for various pre-trade measures of a Clearing Member. Thus, streamlining processing and reporting of critical events during trading hours.
- Built distributed interface among different Eurex trading platforms via AMQP and Google Protocol Buffers.
- Developed AMQP interfaces with different risk entities to exchange data using Google Protocol Buffer format.
Technologies: Java8, EJB3, Hibernate, Apache Qpid, Jboss 7, PostgreSQL, Git, Maven, Google Web Toolkit.

Eurex Cash Payment System (CPS) – Deutsche Börse Group.
- Built a robust cash payment system for Eurex Trading Platform T7. It offers a high degree of flexibility in terms of processing time, payment locations, message formats and multiple currencies.
- Effectively built cluster-based deployment environment in Python3 in Red Hat Enterprise Linux Server.
- Developed a payment bank simulator in Spring Boot that let perform load testing and test concurrent capability by bombarding thousands of payment transactions.
- Simplified processing of payment instructions by building modular SWIFT interface.
- Created a python-based solution to migrate data from flat files, applying pre-processing measures, performing checks and verifications via remote calls and finally loading all refined data into the PostgreSQL database.
Technologies: Java8, Python3, Spring Boot, Hibernate, Apache Qpid, Jboss 7, PostgreSQL, Git, Maven, GPB

ICG Credit Approval System – Citigroup Corporation.
- Gained functional knowledge while working with legal, compliance and lending team on credit approval workflows and lending practices.
- Optimized Citigroup's Risk Management Business workflow using TIBCO iProcess and Spring Scheduler.
- Enhanced UI response rate and operational efficiency of the platform by eliminating legacy codebase.
- Developed Heads-up module that manages automated replies and approvals via SMTP.
- Involved in Performance Tuning to reduce resource consumption using HP Load Runner.
Technologies: Java, Spring, Hibernate, Tibco iProcess, Adobe Flex, IBM WebSphere, Oracle10g, SVN, Maven, JAX-RS, HP Load Runner, Jenkins

TECHNICAL SKILLS
Programming languages: Python3, Java8, R, RDF 1.1, Web Ontology
Framework: Spring Boot, Hibernate, Apache Qpid, Spark Streaming, Big Data / Hadoop basics
ML Libraries: Tensor Flow Basics, Keras, NumPy, Pandas, Scikit-learn
Database: Oracle 10g, MySQL, PostgreSQL, Redis No-SQL
Tools: IntelliJ, GitHub, Maven, Jenkins, JBoss 7, Jupyter Notebook, Tableau, Google Protocol Buffers
Coursera courses: Python for Data Science, Machine Learning with Tensor Flow, Convolutional Neural Networks, Deep Reinforcement Learning, Spark with Java in Big Data specialization.

ACHIEVEMENTS
- Copernicus Hackathon Ireland 2019 Winner: Proposed idea to improve the accuracy and precision of real-time air quality data. Data taken from Sentinel 5p satellite.
- Class Representative for the MSc. Data Analytics 2018/19 which involved liaising between staff and students.
- Received a 'Star of the Month' award for Flawless delivery of a critical requirement - TCS.
- Contributed to NGO Shelter Associates to improve the living conditions of the urban poor in India through Corporate Social Responsibility Program.

INTERESTS
- A Passionate Hiker and a Travel Enthusiast. Have travelled to various places around Pune and North India.
- WaveMaker (Volunteer) at Galway 2020 European Capital of Culture.

REFERENCES
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