RIDHAM DAVE

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EDUCATION AND CERTIFICATION

University of Waterloo, Canada   *September 2021 - Present*
Master of Applied Science, Electrical and Computer Engineering   GPA: 3.98 /4

AWS Certified Solutions Architect   *April 2022 - April 2025*
SAA-C02, Associate Level 🔗   Competencies: 4/4

Gujarat Technological University, India   *July 2016 - Aug 2020*
Bachelor of Engineering, Computer Engineering   GPA: 4/4

WORK EXPERIENCE

Research and Development Product Manager   May 2022 - Present
OneForce Inc.   *Bellevue, Washington, United States*

· Managed the planning, development and launch of solutions powered by AI for Automated Recruitment and Smart Marketing.
· Managed Backend Development team for integrating in-house developed AI-powered algorithms into Production

Machine Learning Operations Engineer   October 2021 - Present
Palitronica Inc   *Waterloo, Canada*

· Involved in projects improving machine learning model creation and industrialization across teams. Modernizing tech-stack by adopting data version control, model tracking and monitoring frameworks to save 20% time operationalizing ML pipelines.
· Empowered the team to handle a large volume of data by architecting highly available and distributed big data infrastructure and automated workflow management using Minio, ElasticSearch, Azure platform and Drone CI.

Research Associate and Lab Manager   October 2021 - Present
Real-Time Embedded Software Group, University of Waterloo   *Waterloo, Canada*

· Managed ESG Lab's Data Center with expertise in IPsec, VPN, Load Balancing, Routing Protocols, SSH, Python and Linux scripting using open-source tools like FreeIPA and Proxmox VE to facilitate research-driven computing projects for 20+ researchers.
· Developed an automated pipeline for conducting data aggregation experiments at multiple government locations by setting up secure ad-hoc micro IT infrastructures with encrypted transmission using WireGaurd VPN, Dnsmasq and Logstash.

Senior Data Scientist   September 2021 - December 2021
OneForce Inc.   *Bellevue, Washington, United States*

· Developed smart data integration and data augmentation pipelines using AWS products and Google Apps Script framework for automating and monitoring bulk professional-networking campaigns using serverless architecture.
· Strategized and developed ETL modules for aggregating multiple data sources for professional contacts to create a model-of-the-World graph structure using Neo4j. Created custom knowledge retrieval library using APOC and Cypher.

Senior Data Scientist   October 2020 - August 2021
Axiom IO, Inc.   *Hyderabad, India*

· Developed scalable applications on AWS for website scrapping for R&D prototyping and analysis using a Serverless framework.
· Created website clusterization and categorization models using machine learning and natural language processing and deployed the pipeline on a scale using DynamoDB, S3 and Lambda functions.

Pirimid Fintech LLP, Ahmedabad   July 2020 - September 2020
Machine Learning Engineering Intern

· Extracted data from the research reports published on the stock from a financial institution.
· Deployed object detection and OCR pipeline in order to get the data from PDFs.

Tata Consultancy Services Limited, Ahmedabad   Dec 2019 - June 2020
Developer Intern

· Created an enhanced Rule Engine to address department-specific rules.
· Worked on configuring and implementing a system that enables the global administrator to create any business rule within any process or workflow of the organization.

Synoptek Pvt. Ltd., Ahmedabad   Jun 2018 - Jul 2018
Data Scientist Intern

· Created classification models for e-commerce websites using neural networks.
· Achieved exposure to classification optimization techniques for further specialization.
· Worked under an experienced Data Scientist and got deep insights related to optimization algorithms.

Indusa Pvt. Ltd., Ahmedabad   Jan 2018 - Feb 2018
Android Developer Intern

· Worked for an enhanced data storage android application enabling customized profile options.
· Worked on providing restrictions to a user based on roles and policies respectively.
· Worked on the cloud architecture for data warehousing and storage.

Indusa Pvt. Ltd., Ahmedabad   Jun 2017 - Jul 2017
Mobile App Development Intern

· Understood mobile application development and testing on the Xamarin Framework.
· Participated in designing and developing app screens and its workflow using activities and fragments.
· Worked on designing, enhancement, bug-fixing, and maintenance of the application.

PROJECTS

Real-Time Bus Prediction | *Android, Firebase, IOT, Keras*
This project aims at providing real-time information on public transport buses using a low-cost IoT solution. The prediction engine is based on the Deep Learning approach assembled in an Android App with Firebase cloud support. Best Project under SSIP, Government of Gujarat

Data Storage
This android application uploaded on Amazon Appstore can be used to safely store, access, search files, and can manage two different accounts together i.e. private and public, quickly view your content and see file details and activity.

Edu.io
This project created using Node.js, Vue.js, and Sqlite won Second Prize in the IEEE hackathon conducted by DA-IICT, Gandhinagar. The project aims upon providing a seamless, multiway educational environment using an approach for multiuser digital whiteboard with built-in live video chat and interactive tools.

Image-Text Combined Embedding for Image-Text Search | *Tensorflow, Scikit Learn, NLTK*
Implemented robust method to learn image-text joint embeddings by optimizing Bi-directional ranking and preserving structure between matching pairs using Transfer Learning. Achieved 15% faster training time as compared to State-of-the-art models. 🔗

Traffic Analysis of Congestion Spots in VANETs using LSTM | *Keras, Scikit Learn*
Invented a novel approach to predict traffic congestion in a Vehicular Ad-hoc Network using a central SDN controller. Developed a three-tiered architecture for Spatio-temporal traffic prediction, which achieves 97% accuracy in real-time density estimation. 🔗

Classification of Websites using ML & DL | *Scikit Learn, NLTK*
Developed a scalable industrial website extraction framework to classify a multi-paged website into multi-level categories. Orchestrated the serverless architecture using lambda functions over the cloud, with 95% accuracy and sub-second latency. 🔗

TECHNICAL SKILLS

Languages & Tools	Python, JavaScript, Keras, Tensorflow, PyTorch, Scikit-Learn, AutoML, NLTK, OpenCV
Databases & Storage	MongoDb, DynamoDb, ElasticSearch, Redis, Neo4j, MySql, Minio, S3
Cloud Technologies	Amazon Web Services, Google Cloud, Microsoft Azure, IBM Cloud
Version Control	Github, Gitea, Drone CI, MlFlow, DVC, BitBucket, SVN

PUBLICATIONS

SDN-based real-time urban traffic analysis in VANET environment, Computer Communications 🔗

Advances in Single Image Super-Resolution: A Deep Learning Perspective 🔗

Automated Machine Learning: The New Wave of Machine Learning 🔗

AUTHORED ARTICLES

Article: Industrial Classification of Websites by Machine Learning with hands-on Python, Towards Data Science, Medium (Views: 35K, Published: July 30,2018) 🔗

Article: Create your Professional/Educational resume using LaTeX, Towards Data Science, Medium (Views: 36K, Published: Sep 24, 2019)🔗

ACADEMIC ACHIEVEMENTS

Awarded Certificate of Excellence for being Top Ranker 2017 in Devang Mehta IT awards.

Project 'Real-Time Bus Prediction in City Transport' won Best Project under Multi-Disciplinary category under SSIP, Government of Gujarat

Received Scholarship For Higher Education(She) Component Under Inspire Scheme worth INR 4,00,000

Achieved A Grade in Diploma in Multilingual Computer Programming from C-DAC, GIST

First Runners up in Tic-Tech-Toe Hackathon organized by IEEE, Gujarat at DA-IICT, Gandhinagar for Project 'Edu.io' in January 2018

Won First Prize in Zonal C quiz Competition Organized by Silver Oak Institute, Ahmedabad.

EXTRA-CIRRUCULAR

Co-Organized " Vishwahack 1.0" - a National hackathon at VGEC under GTU Central TechFest, 2018.

Attended a workshop on Machine Learning and artificial intelligence from faculties of IIT Roorkee in 2019 and won the zonal round for the challenge presented.

Member of the Institute of Engineers since 2017.

Completed Basic Leadership Training under Project Youth Brigade INVINCIBLE- The NGO

Attended international conference on Computing, Communications, and Cyber-Security(IC4S-2019), Chandigarh

MOOC CERTIFICATIONS AND AUDITING

Professional Certifications

- IBM Data Science, an online, non-credit Professional Certificate by IBM

Specializations

- TensorFlow in Practice , an online, non-credit Specialization by deeplearning.ai(4 Courses)

- Deep Learning , an online, non-credit Specialization by deeplearning.ai(5 Courses)

- Machine Learning with TensorFlow on Google Cloud Platform, an online, non-credit Specialization by GCP(5 Courses)

- Advanced Machine Learning with TensorFlow on Google Cloud Platform, an online, non-credit Specialization by GCP(5 Courses)

- Introduction to Data Science, an online, non-credit Specialization by IBM(4 Courses)

- Applied Data Science, an online, non-credit Specialization by IBM(4 Courses)

Course Certifications on Coursera

- Neural Networks and Deep Learning, an online non-credit course authorized by deeplearning.ai.

- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, an online non-credit course authorized by deeplearning.ai.

- Structuring Machine Learning Projects, an online non-credit course authorized by deeplearning.ai.

- Sequence Models, an online non-credit course authorized by deeplearning.ai.

- Convolutional Neural Networks, an online non-credit course authorized by deeplearning.ai.

- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, an online non-credit course authorized by deeplearning.ai.

- Convolutional Neural Networks in TensorFlow, an online non-credit course authorized by deeplearning.ai.

- Natural Language Processing in TensorFlow, an online non-credit course authorized by deeplearning.ai.

- Sequences, Time Series and Prediction , an online non-credit course authorized by deeplearning.ai.

- How Google does Machine Learning, an online non-credit course authorized by Google Cloud.

- Launching into Machine Learning, an online non-credit course authorized by Google Cloud.

- Intro to TensorFlow, an online non-credit course authorized by Google Cloud.

- Feature Engineering, an online non-credit course authorized by Google Cloud.

- Art and Science of Machine Learning, an online non-credit course authorized by Google Cloud.
- End-to-End Machine Learning with TensorFlow on GCP, an online non-credit course authorized by Google Cloud.
- Production Machine Learning Systems, an online non-credit course authorized by Google Cloud.
- Image Understanding with TensorFlow on GCP, an online non-credit course authorized by Google Cloud.
- Sequence Models for Time Series and Natural Language Processing on GCP, an online non-credit course authorized by Google Cloud.
- Recommendation Systems with TensorFlow on GCP, an online non-credit course authorized by Google Cloud.
- Introduction to Self Driving Car, an online non-credit course authorized by University of Toronto
- What is Data Science?, an online non-credit course authorized by IBM.
- Data Science Methodology, an online non-credit course authorized by IBM.
- Open Source tools for Data Science, an online non-credit course authorized by IBM.
- Python for Data Science and AI, an online non-credit course authorized by IBM.
- Data Analysis with Python, an online non-credit course authorized by IBM.
- Data Visualization with Python, an online non-credit course authorized by IBM.
- Databases and SQL for Data Science, an online non-credit course authorized by IBM.
- Machine Learning with Python, an online non-credit course authorized by IBM.

CURRENT RESEARCH DIRECTION

Implementation of Deep Learning on Vehilux Traces under VANET

Image Super Resolution using Deep Learning

Automated Machine Learning - A comprehensive survey

PERSONAL TRAITS

Highly motivated and eager to learn new things.

Strong motivational and leadership skills.

Ability to work as an individual as well as in group.