RAUL A. MORALES DELGADO

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Summary

Data Scientist at Emote AI, currently developing backend infrastructure (pipelines for Deep Learning models and data pre- and postprocessing) for a Minimum Viable Product (MVP). 3½+ years of work experience in data analysis. Master of Engineering (MEng) by UofT. Diploma in Data Science — completed a project in image classification using Deep Learning. Mainly interested in the intersection of applied Deep Learning and cloud computing to find sustainable and comprehensive solutions to big data problems. Developed `espressomaker` (PyPI package).

Work Experience

- jan**2020**–present: Data Scientist, **Emote AI**

Co-designed backend architecture and created applications to enable I/O to RDS Postgres DB and S3 storage from EC2 instances, including piping for data preprocessing, two Deep Learning models, data post-processing and storage. • Improved post-processing performance by ~67%. • Implemented a backend server-wide logging system • Leading the execution of a $30k R&D agreement to develop joint production-level and research software. • Prepared cost estimates for AWS resources. • Participated in technical deep dives with potential clients and investors.

- oct**2012**–jul**2016**: Maintenance Supervisor, **Repsol**

Technical and economic data analysis of maintenance activities to gas stations (cost reduction, workload distribution and operational efficiency) for business strategy optimization. • Periodic reporting to internal (directors and upper management) and external (end customers) stakeholders • Project Management: successfully renovated 30% of fuel dispensers from October 2015 to May 2016 (USD$ 1.1M).

Projects

- sep**2020** (ongoing): **Website — Personal blog**

Developed my personal blog — a website built with Hugo and deployed with Netlify. This blog contains posts, tutorials and projects I've been working on since 2019.

- nov**2019**: `espressomaker` **PyPI Package (v0.1rc1)**

Python 3 module that provides a context manager (+ functions) to modify the power management settings on a MacOS so that lengthy processes can run uninterruptedly.

- mar**2019**: Data Science Capstone Project, **BrainStation**

"Classifying Landscape Images with Overlapping Features Using Convolutional Neural Networks." ~91% accuracy; developed in Python + TensorFlow, Keras, Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn on AWS EC2 (Ubuntu w/Deep Learning AMI) & S3.

- may**2017**–oct**2018**: MEng Research Project, **University of Toronto**

Optimized an EPA burning procedure for experimental testing, implemented a particle sizer system (SMPS) to study particulate matter behaviour. Developed in Python.

Postsecondary Studies

- jan**2019**–mar**2019**: Diploma in Data Science, **BrainStation**
- sep**2016**–oct**2018**: MEng in Mechanical Engineering w/ Emphasis in Sustainable Energy, **University of Toronto**
- mar**2006**–jul**2012**: Mechanical Engineering, **Pontifical Catholic University of Peru**

  TA for Thermodynamics II, aug2012–jul2016.

Languages

Spanish: Native. • **English**: Fluent • **French**: Basic.

Skills

- **Technical:** Statistics (parametric and non-parametric), Exploratory Data Analysis, Feature Engineering, Supervised and Unsupervised ML for Predictive Modeling, Deep Learning (FFNN, CNN, RNN), Rec. Systems (ALS-WR), Data Analytics and Visualization.
- **Languages:** Python, MySQL, Postgres.
- **Data Analysis:** NumPy, Statsmodels, SciPy, Pandas.
- **Data Visualization:** Matplotlib, Seaborn, Bokeh, Tableau.
- **ML & DL:** Scikit-learn, Keras & Tensorflow, Pytorch, OpenCV.
- **Data Eng. & DevOps:** *nix environments, shell scripting, SSH, Git & GitHub, Apache Spark (PySpark).
- **Cloud Platforms:** AWS (EC2, S3, RDS, IAM), GCP (CE, Storage, BigQuery).
- **OS & Office Suites:** MacOS, Linux, Windows, MS Office, Google Suite.
- **Engineering & Others**: LaTeX, MATLAB, Markdown, HTML, CSS.

Continuous Studies

- **In course**: Nanodegree in Data Engineering & Nanodegree in Natural Language Processing (NLP), Udacity.

Hobbies

- Typography.