

Neil John D. Ortega

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EXPERIENCE

• Data Scientist

Nov 2016 — Present

Teradata Corporation

◦ Survey Response Classification

AI-based app for automated tagging of free-form customer survey responses with the goal of speeding up market defect discovery. Involved in developing the solution architecture. Wrote backend and frontend code for data ingestion and model results visualization. Trained and tuned LSTM + word-embedding models for the classification task. Created Docker-based pipeline for the team for efficient deployment to both local and production environments.

◦ Customer Behavior Modeling

Hidden Markov model for predicting behavior of telecom subscribers for location-based and time-based targeting. Created parallelized Python pipeline to operationalize the model developed by data scientists. Benchmarked and optimized performance for both Hive data store and Teradata Aster compute engine that reduced end-to-end (E2E) processing time from several days to 2-3 hours.

◦ Model Monitoring and Maintenance

Created a Spark / Shiny application that allows users to run a scoring model against datasets residing in HDFS. Implemented dashboards for visualizing metrics indicating the health of the models. Deployed entire solution via Ansible and Cloudera Manager on the customer's AWS cluster. Solution streamlined the customer's processes and reduced E2E processing time from 1 week to 1 hour.

◦ Load Demand Forecasting and Disaggregation

Created an interactive Shiny application with a custom map UI via Leaflet that allows users to visualize both actual and forecasted electrical load demand and disaggregation.

◦ Real-Time Social Media Discovery

Real-time sentiment analysis application made using Apache NiFi, Kafka, Spark Streaming and Spark ML (Machine Learning). Implemented both backend, using NodeJS and MongoDB, and frontend using Covalent/Angular and in-house chart widgets.

◦ Internal Consultant Directory

Custom internal directory for consultants connected to a recommender system meant for improving resource allocation and management. Wrote the REST API backend in Django and django-rest-framework.

◦ On-Site Search Improvements

Integrated pandas and numpy into Flask backend to improve its performance. Updated visualizations written with c3.js and d3.js.

◦ Plugin Development

Helped develop an internal reusable R plugin for creating customizable plots and widgets for Shiny applications.

◦ On-boarding Materials

Created customized demo and exercise materials for Apache NiFi, Kafka, and Storm, integrating the three into a single streaming dataflow application in a Cloudera environment.

• Senior Software Engineer

Sep 2011 — Nov 2016

icannhas Inc.

PROJECTS

• QuantSoftware Toolkit

Open source python library for financial data analysis and machine learning for finance.

• Github Visualization

Data Visualization of Git Log data using D3 to analyze project trends over time.

• Recommendation System

Music and Movie recommender systems using collaborative filtering on public datasets.

• Mac Setup

Book that gives step by step instructions on setting up developer environment on Mac OS.

EDUCATION

- **Bachelor of Science in Civil Engineering, Magna Cum Laude**

2006 — 2011

University of the Philippines, Diliman, Quezon City