

Juan Diego Dumez

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EDUCATION

Northeastern University, Khoury College of Computer Sciences

Boston, MA

Master of Science in Computer Science GPA: 4.0/4.0

Sep 2022 – May 2025

Universidad de America

Bogota, COL

Bachelor of Science in Petroleum Engineering GPA: 4.59/5.0 (92%)

Jul 2013 – Nov 2019

Universidad de los Andes

Bogota, COL

Bachelor of Science in Geosciences GPA: 4.52/5.0 (90%)

Jul 2014 – Jul 2019

Relevant Coursework: Discrete Structures, Object Oriented Design, Data Structures and Algorithms, Algorithms, Database Management Systems, Web Development, Modeling & Numerical Analysis

Awards: Khoury Research Apprenticeship, Colfuturo Scholarship, First Place PetroBowl Championship, Ramon de Zubiria Distinction, Academical Excellence Distinction

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, JavaScript, HTML, CSS, MATLAB, SQL, R, VBA

Technologies: React, Node.js, Express.js, jQuery, Redux, Bootstrap, MongoDB, MySQL, Spring, Spark, Hadoop

Tools: Git/GitHub, PowerBI, Tableau, JIRA, Visual Studio, PyCharm, IntelliJ, Microsoft Office

Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, PyTorch, PySpark, TensorFlow

EXPERIENCE

Northeastern University - Khoury Research Apprentice

Sep 2023 – Present

Interactive Petabyte Scale Applications

Boston, MA

- Enhanced the NeRF pipeline scalability using commercial clouds, optimizing real-time geospatial data access and alignment algorithms for improved interactive petabyte-scale applications

Northeastern University - Graduate Teaching Assistant - Head TA

Jan 2023 – Present

Discrete Structures (CS5002)

Boston, MA

- Holding office hours in a one by one group settings for reviewing course content and answering students' questions
- Assisted professor to manage logistics for the course, grading exams and students' homework for 100+ students
- Promoted as the head TA for Fall 2023, responsible for overseeing the team of 9 TAs and coordinating their tasks

Drummond Energy - Petrophysicist — Scrum Master

Mar 2020 – Jul 2022

Petrophysicist (May 2022 - July 2022) — Jr Petrophysicist (Mar 2020 – Apr 2022)

Bogota, COL

- Reduced costs and time by developing ML models for predicting sonic well logs and rock classification, eliminating the need for expensive tools and decreasing rock classification time by 50%
- Improved collaboration by implementing a SharePoint website for sharing department's products and serving as a repository for key deliverables
- Enhanced subsurface data management by creating and updating databases for Cesar-Rancheria Basin wells, enabling informed decisions for future well data acquisition
- Provided Agile project management support as a Scrum Master for a team of 11 contributors, implementing Agile Methodologies

PROJECTS

COVID-19 positive cases analysis in Colombia | Python3, Pandas, Seaborn, SciPy

May 2023

- Accomplished a comprehensive analysis of COVID-19 cases in Colombia by exploring correlations between mortality rates, regions, and ethnic groups

Sonic Well Logs Prediction | Python3, PySpark, Pandas, Matplotlib, Seaborn, Plotly

Jan 2022

- Accomplished precise prediction of P and S wave transit times in wells using supervised machine learning models, showcasing the transformative impact of ML in Oil & Gas subsurface resource characterization.

Rock Type Classification and Properties Prediction | Python3, Pandas, Seaborn, Plotly, scikit-learn

Nov 2021

- Accomplished enhanced rock typing classification and prediction of diverse rock properties using supervised and unsupervised ML models, leading to a comprehensive understanding of rock types