Alejandro Batres

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SKILLS SUMMARY

- **Languages:** Python, SQL, C++, Javascript/Typescript
- **Frameworks:** Airflow, PyTorch, Psycopg2, Scikit, Numpy, Pandas, Matplotlib/Seaborn, OpenCV, React, Next.js
- **Technologies:** AWS Services, PostgeSQL, Airflow, Pentaho, Vim, Linux/Unix CLI, Jupyter, Git/Github/Gitlab

EXPERIENCE

- **TransUnion**   Remote
  Data Engineer   ***Dec 2022 - Present***
  - Guaranteed accurate end-user data in monthly dashboard deliverables on an efficient basis by creating and managing Pentaho workflows and completing data validation with the use of SQL and Python scripts.
  - Established and conducted data quality checks in AWS Redshift by performing regression and time-series analysis on large datasets, and making subsequent workflow improvements based on observations found in data.
  - Added features to client performance insights workflow by re-configuring AWS EC2 and making code-level optimizations in Python scripts.

- **Allevia**   Remote
  Application Development Intern   ***Aug 2021 - Jan 2022***
  - Designed an optimized relational model and data pipeline for the collection and modeling of user input utilizing AWS S3 for secured storage of user data and AWS Lambda for the processing of user metrics.
  - Implemented an interactive user-faced mobile application using the React Native for deployment on both IOS and Android with a concentration on accessibility and ease of use.

- **The Coding School**   Montclair, NJ
  Computer Science Tutor   ***Sep 2022 - Dec 2022***
  - Designed and assisted students with projects in Python and Java to develop students' skill programming ability.
  - Conducted lessons to groups of students in Python and Scratch to provide an introduction to coding languages.

- **Montclair Tutoring**   Montclair, NJ
  Mathematics and Science Tutor   ***Aug 2018 - Dec 2022***
  - Instructed students of all ages (K-12, adults) in elementary mathematics, algebra, calculus, statistics, chemistry and physics. Provided test preparation for SSHAT, ISEE, SAT, ACT, ASVAB, Praxis, GED.

- **Batres Creative Services**   Union City, NJ
  Production Intern   ***May 2015 - Aug 2019***
  - Developed a set of web applications used internally that centralized current and historical job ticket information, as well as organized assets stored in a local database.
  - Performed rapid prototyping of websites with various levels of functionality for the purpose of client feedback and project iteration. Using HTML/CSS/Javascript and React.
  - Provided technical assistance on the construction of a television studio by connecting a software interface to several lights, displays, audio and visual equipment.

EDUCATION

- **New York University Tandon School of Engineering**   Brooklyn, NY
  Bachelor of Science in Mathematics; Minor in Computer Science   *Aug 2018 - May 2022*
- **Relevant Coursework:** Object Oriented Programming, Data Structures, Analysis of Algorithms, Machine Learning, Databases, Linear Algebra, Applied Probability, Applied Statistics, Numerical Analysis, Math Modeling

PROJECTS

- **Airline Reservation System**
  - Model airline reservation system for users and staff to create and book flights and track tickets.
  - Utilized Python Flask and used SQL for queries on a mySQL database. (2022)

- **Wildfire Severity Classifier**
  - Supervised learning model for classification of wildfire severity based on the burn level of surrounding vegetation.
  - Created a logistic regression model, support vector machine, and neural network from scratch in Python.
  - The most accurate model used a neural net with a ReLU activation function, giving an accuracy of about 82%. (2020)

- **School Scheduling Application**
  - Created a SAT solver command-line application in Python for scheduling students into classes based on their schedules.
  - Found an optimized solution utilizing Google CP-Model. (2019)