Alejandro Batres

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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

Skills Summary

- **Languages:** Python, C++, SQL, Java, Javascript/Typescript.
- **Frameworks:** React, React Native, Next.js, PyTorch, Scikit, Numpy, Pandas, Matplotlib/Seaborn, OpenCV.
- **Technologies:** Vim, Tmux, Visual Studio Code, XCode, Linux/Unix Command Line, Jupyter Notebook, Git/Github.

Experience

- **Allevia** — Remote
  Application Development Intern — ***Aug 2021 - Jan 2022***
  - Developed 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.
  - Designed a relational model and data pipeline for the collection and modeling of user input utilizing AWS S3 for secured storage of user data.
- **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.
  - Rapid prototyping of websites with various levels of functionality for the purpose of client feedback and project iteration. Built in pure CSS, HTML and Javascript.
  - Provided technical work on the development of a television studio, including connecting a software interface to several lighting, displays, audio and visual equipment. Provided maintenance to said equipment, as well as produced content for clients as well as acting as co-director on several productions.

Projects

- **Point A to Point B**
  - Analyzed survey data from NYU students to create identify the best way to subsidize travel for commuters.
  - Collected data on Google Forms and analyzed in Python to discover data trends. (2022)
- **Personal Website**
  - Personal portfolio to display current projects developed using Next.JS. (2022)
- **Airline Reservation System (Databases Final Project)**
  - 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 (Machine Learning Final Project)**
  - 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)
- **Weather Applet**
  - Created from scratch a web app that provides the current temperature and forecast for a number of cities in the U.S.
  - Utilized a weather API for accurate forecasting in React JS. (2019)
- **School Scheduling Application**
  - Created a SAT solver in a command-line application for scheduling students into classes based on their prospective schedules by using conflicts in potential schedules to find an optimized solution.
  - Utilized Google OR-Tools in Python. (2019)