Casey Arbelaez

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# Education

**Northwestern University** Evanston, IL

*Bachelor of Science in Industrial Engineering Sep. 2023 – June 2027*

**Doral College** Doral, FL

*Associate in Arts - Summa Cum Laude Aug. 2020 – May 2023*

**Relevant Courses**

*Intro to Computer Science, Multi-variable Calculus, Linear Algebra, Economics and Finance for Engineers*

# Technical Skills

**Languages**: Python, Excel, JavaScript, HTML/CSS, MATLAB

**Frameworks**: React

**Developer Tools**: VS Code, PyCharm

**Libraries**: NumPy, Matplotlib

# Honors and Awards

**QuestBridge National College Match** *| Awarded by QuestBridge* Dec. 2022

* Awarded a full-ride scholarship to Northwestern University worth over $350,000+ for high achieving students from underrepresented backgrounds (first-generation and low-income)

**National Hispanic Recognition Award** *| Awarded by College Board* Aug. 2022

* Received the National Hispanic Recognition Award, which identifies and honors Hispanic students who have a 3.5+ GPA and scored highly on the PSAT exam

# Experience

**Data Entry Assistant** June 2022– June 2023

*Pixel Neon Studios Glenvar Heights, FL*

* Created a Financial Spreadsheet using Excel to map projected revenue growth
* Accomplished a 10% increase in internal productivity by implementing an Inventory Management System using Excel on 100+ different items
* Established a method for recording valuable data using Google Sheets and surveys to determine optimal product pricing throughout the year

**Manufacturing Assistant** June 2020 – Jan. 2022

*Pixel Neon Studios Miramar, FL*

* Communicated with 120+ clients and translated several emails to initiate sales and facilitate communication
* Planned and independently executed the electrical circuitry of 100+ Neon signs, improving revenue by 20%
* Worked in inventory management by tracking item quantities and reporting item re-stocks in order to prevent operation delays or manufacturing complications

# Projects

**Digit-Recognizer with Machine Learning** *| Python* June. 2023 - present

* Constructed a 2-layer Neural Network, from scratch, to recognize hand-written digits on a 28x28 pixel grid
* Trained the Neural Network with over 40,000 samples of training data, and achieved 90% accuracy with a 1,000 sample data set

**Simple ”To-Do” list** *| HTML, CSS, JavaScript, React* June 2023 – Sep. 2023

* Developed a basic front-end organizational application with React components and utilized React’s virtual DOM to efficiently update content on the screen
* Designed an interactive modern UI using HTML/CSS and JavaScript

**PageRank Algorithm** *| MATLAB* Sep. 2023 - present

* Programmed an iterative algorithm using linear algebra and MATLAB to determine the importance of each web page in a 1 million page internet
* Optimized the solution process by implementing memory-efficient data structures to decrease latency and improve program performance by 35%