Diego Arteaga

(661) 219-4382 | darteaga520@gmail.com | darteaga.me | github.com/d-arteaga

Education

California State University, Northridge — Starting August 2025
Master of Science in Data Science — *Northridge, CA*

California State University, Northridge — May 2025
Bachelor of Science in Computer Science; Summa Cum Laude — *Northridge, CA*

Relevant Coursework in:

- Data Structures, Algorithm Design & Analysis, Software Engineering, Machine Learning, Data Mining, Database Design, Probability & Statistics, Web Engineering, Networks & Security

Experience

Video Editor & Performance Analyst — Nov 2021 - March 2025
Los Angeles, CA

- Produced and edited engaging **YouTube** and **TikTok** content for clients, optimizing audio and video workflows using **Ableton Live, Adobe Premiere Pro, After Effects,** and **Photoshop**, improving overall production efficiency
- Analyzed viewer engagement and performance metrics using **Python** and **Pandas**, uncovering trends that led to data-driven optimizations in content strategies, leading to over **11 million views** and a **31% increase in retention**
- Performed A/B testing on content formats, identifying key factors that **improved audience engagement by 23%**

Studio Musician — Nov 2021 - Dec 2024
Los Angeles, CA

- Collaborated with diverse teams in high-pressure studio environments, meeting strict deadlines while enhancing communication, teamwork, and problem-solving skills–directly applicable to agile management practices
- Managed social media accounts and album marketing efforts, **increasing audience engagement by 20%**

Projects

Healthcare IoT Device Anomaly Detection | *Python, Scikit Library, Pandas, Matplotlib*

- Detected device-level anomalies (sensor noise, signal drift) in PPG wearables using **Isolation Forest**, improving faulty data flagging by 20% and reducing manual review workload
- Engineered **20+ diagnostic features** (mean, variance, peak-to-peak, BVP-ACC correlation) from raw PPG and accelerometer data to isolate hardware faults, like loose sensors, from motion noise

Lung Cancer Detection | *Python, Jupyter Notebook, TensorFlow, Keras, OpenCV, NumPy*

- Trained a **CNN** using **TensorFlow** on the **LIDC-IDRI CT scan dataset**, leveraging **radiologists' annotations** for malignancy scores and ROI coordinates to extract lung nodule regions and improve model's recall
- Applied **OpenCV** and **NumPy** to preprocess over **10,000 DICOM images** and used **Matplotlib** with **SimpleITK** for visualization, enhancing feature clarity and model interpretability

Agricultural IoT and Machine Learning Platform | *GitHub, Jira, React, Node.js, Python, Postman*

- Designed a real-time dashboard using **React** and **Bootstrap** to visualize sensor data within a team of 12 students via **GitHub** and **Jira**, aimed at helping Colombian farmers monitor weather conditions and improve crop yields
- Conducted QA testing with **Postman** for **Python** backend to validate API endpoints, improving data transmission
- Developed machine learning algorithms with team to correlate them with plant sickness and crop growth
- **Won 1st Place** at **CSUNposium 2025** for presenting a smart farming project and delivering a self-written speech

Spotify Clone | *React, Node.js, Express.js, MySQL, Vite.js, Axios, Bootstrap*

- Redesigned my personal full-stack music streaming platform, originally built with **PHP** and **JavaScript**, using **React** and **Bootstrap** for a modern, responsive UI, significantly improving user engagement
- Developed a **Node.js** and **Express.js** backend with **MySQL**, optimizing query performance and API response times
- Implemented a real-time search bar, dynamically filtering songs and reducing search latency by 30%

Skills

Programming Languages: Java, JavaScript, Python, SQL (MySQL), HTML/CSS, C++
Frameworks/Libraries: React, Node.js, Express.js, Bootstrap, Vite.js, NumPy, Pandas, Matplotlib, Scikit-Learn, TensorFlow
Developer Tools: Git, GitHub, Visual Studio Code, Jira, Jupyter Notebook, Anaconda, NPM, AWS, Docker
Languages: English, Spanish, Japanese