DIEGO ARTEAGA

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EDUCATION

California State University, Northridge — May 2027
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 for Data Science, Web Engineering, Networks & Security

EXPERIENCE

Machine Learning Research Assistant — June 2025 - Present
California State University, Northridge — *Northridge, CA*
- Designed an **intrusion detection system (IDS)** for **IoMT networks** leveraging **Graph Neural Networks (GNNs)** and **Transformers** to detect and classify abnormal device behavior and network attacks in patient monitoring systems.
- Presented key findings from a literature review on deep learning-based intrusion detection for IoMT and IoT networks to guide team discussions and meetings and align model architecture decisions across the group

Video Editor & Digital Content Strategist — Nov 2021 - May 2025
Arrowstotle LLC — *Los Angeles, CA*
- Produced and edited engaging **YouTube** and **TikTok** content for clients since 2024, optimizing audio and video workflows using **Ableton Live, Adobe Premiere Pro, After Effects,** and **Photoshop**, improving production efficiency
- Led social media content strategy using YouTube Studio analytics since 2021 to guide video formats, post timing, & thumbnail design; A/B testing and retention analysis drove **11M+ views** and a **15%** boost in engagement & revenue

Studio Musician — Nov 2021 - Dec 2024
Freelance — *Southern California*
- Collaborated with diverse teams in studios and venues across SoCal, meeting strict deadlines while working with members on arrangements, recording sessions, and marketing strategy for album and show promotion

PROJECTS

Healthcare Device Anomaly Detection | *Python, Scikit-learn, Pandas, Matplotlib, SHAP*
- Built an anomaly detection system for wearable health devices using **Isolation Forest** on statistical and frequency features engineered from **PPG, accelerometer, and temperature data**, improving faulty signal detection by **20%**
- Applied **SHAP** to identify key features influencing anomalies, improving model transparency and trust

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 nodule regions, achieving **94% recall** for lung nodule detection
- Preprocessed **10,000+ DICOM images** & applied **data augmentation** techniques to enhance model generalization

Agricultural IoT and Machine Learning Platform | *GitHub, Jira, React, Node.js, Python, Postman, Firebase*
- Designed a real-time dashboard using **React** and **Bootstrap** to visualize environmental sensor data from **Firebase** within a team of 12 students via **GitHub** and **Jira**, integrating and testing **Python backend APIs**
- Developed machine learning models 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

Nintendo Switch Game Sales Analysis | *Google Sheets, SQL, Google BigQuery, Tableau*
- Cleaned sales data for **100+ Nintendo Switch games** in **Google Sheets** and queried it in **Google BigQuery** for EDA
- Built **Tableau** dashboards to visualize sales trends by genre, release year, and developer, delivering recommendations for game release strategies based on historical insights

SKILLS

Programming Languages: Java, Python, JavaScript, SQL (MySQL, Google BigQuery), 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, Google Sheets, NPM, AWS
Certifications: Google Data Analytics Professional Certificate (Coursera 2025)
Languages: English, Spanish, Japanese