

Oscar Manuel Arenas

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Education

M.S. in Computer Science , California State University, Long Beach	Expected: May 2026
B.S. in Computer Science , California State University, Long Beach	May 2024

Experience

Data Infrastructure & Analysis Intern (<i>JavaScript, Google APIs</i>) <i>Willog Co., Ltd.</i>	<i>Seoul, South Korea</i> <i>Dec 2025 – Jan 2026</i>
<ul style="list-style-type: none">Designed and implemented a production Sales CRM web applicationBuilt a Kanban-based lead management system backed by Google Sheets and supporting multi-user workflowsIntegrated Google Gmail, Calendar, and Drive APIs for email tracking, scheduling, and document linkingDeveloped analytics dashboards with KPIs and interactive charts to visualize pipeline value, win rates, and sales performance	
Machine Learning Graduate Researcher (<i>Java, Python</i>) <i>Data Semantics and Human Data Interaction (D²) Lab, CSULB</i>	<i>Long Beach, California</i> <i>August 2025 – Present</i>
<ul style="list-style-type: none">Applying machine learning to classify pilot performance based on eye-gaze dataAnalyzed eye-tracking data from flight simulation studies to measure pilot attention and visual scanning patterns using fixation, saccade, pupil, and blink metricsApplied statistical methods (means, medians, standard deviations) to compare descriptive gaze measures across pilot sessionsBuilt data-cleaning protocols with range checks, outlier detection, and missing-value handling to ensure data integrity	
AI Research Intern (<i>AutoGen, Python</i>) <i>USC Institute for Creative Technologies</i>	<i>Los Angeles, California</i> <i>May 2025 – August 2025</i>
<ul style="list-style-type: none">Designed a workflow to analyze 3rd to 12th grade English science text datasets to evaluate LLMs such as ChatGPT-4o, Gemini, and locally hosted Hugging Face models on Spanish translations performance using Spanish readability metricsDeveloped Python scripts to evaluate untargeted vs. grade-targeted Spanish translations, and implemented a Microsoft AutoGen multi-agent prompt retry system that improved grade-level alignment accuracy by up to 60%Documented workflows and statistical analysis processes so researchers could trace, reproduce, and extend experiments	
Data Science Intern (<i>HTML, CSS, Python, JavaScript</i>) <i>National Nuclear Security Administration</i>	<i>Remote</i> <i>May 2024 – April 2025</i>
<ul style="list-style-type: none">Interned at the NNSA Defense Nuclear Nonproliferation R&D office supporting the Data Science portfolioCreated an ontology focused on Trustworthy, Effective, and Deployable AI (TED-AI) using Python to better characterize current focus areas, opportunities, and potential gaps for DNN R&DDeveloped a modular VS Code extension with drag-and-drop dataset uploads and D3.js visualizations, enabling non-technical users to explore ontology data	

Personal Projects

Golf Course Segmentation (<i>Python, TensorFlow</i>)	<i>Oct 2025</i>
<ul style="list-style-type: none">Trained and fine-tuned a custom U-Net model for multi-class aerial image segmentation of golf course featuresImplemented end-to-end preprocessing, training, evaluation, and inference workflow	
Daily Vending Machine Sales Forecasting (<i>Python, TensorFlow, Pandas</i>)	<i>Spring 2025</i>
<ul style="list-style-type: none">Analyzed time-series sales data from vending machines to identify daily and weekly purchasing trendsEvaluated model performance using RMSE, MAE, and MAPE metrics to assess forecast reliability	
AI-Agents Pong Game (<i>Python, Typescript, Flask</i>)	<i>Mar–Apr 2024</i>
<ul style="list-style-type: none">Built a VS Code WebView Pong game with both paddles autonomously controlled by AutoGen agents.Wrote Playwright tests for launch, gameplay, and scoring to ensure functionality.	

Skills

Programming: Python JavaScript Java R SQL Typescript	Coursework: Machine Learning SWE Algorithms
Tools: Git Azure (AI Foundry) Figma Claude Code Docker	Libraries: PyTorch TensorFlow NumPy Pandas

Scholarships

- James D. Woolever CIS Scholarship | Nega Family Scholarship for Students in Technology
- STEAM Scholarship Award (Neudesic) | Internship Essay Contest Winner (2024, CSULB)