

# Jorge Arambula

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## EDUCATION

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University of California, Davis | Davis, CA

September 2025

B.A. - Cognitive Science

**Coursework:** Programming, Data Structures, Object-Oriented Programming, Combinatorics, Artificial Intelligence, Computational Linguistics, Probability Theory, Computational Social Sciences, Parallel Architectures

## SKILLS & TECHNICAL TOOLS

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**Languages:** Python, Java, JavaScript, C, HTML/CSS, Scheme

**Frameworks & Libraries:** TensorFlow, Keras, NumPy, Pandas, Matplotlib, React, Node.js, Express

**Developer Tools:** Git, AWS, Jupyter Notebook, Linux, MATLAB, Vite

## EXPERIENCE

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IT Systems Administrator | MasTec Advanced Technologies

April 2025 - Present

- Administered Windows-based infrastructure supporting 500+ users across 1000+ devices, delivering 98% uptime while ensuring full security compliance for a mid-sized organization.
- Led enterprise wide-security initiatives including comprehensive security patch management and automated backup systems, maintaining system integrity and disaster recovery capabilities across all business units.
- Implemented automated user provisioning process, reducing manual effort by 40% through custom scripting that validates onboarding data against UKG systems, enabling same-day account creation.

IT Helpdesk | MasTec Advanced Technologies

June 2022 - April 2025

- Managed Okta SSO and 2FA implementation for 200+ users, ensuring HIPAA and SOC2 compliance through robust security controls, audit logs, and reporting capabilities.
- Designed and executed bi-annual phishing simulation campaigns for entire organization, achieving 70% reduction in successful attacks through targeted end-user training programs.

Teaching Assistant | University of California, Davis

January 2022 - March 2022

- Mentored 60 students in Python programming fundamentals, including problem-solving techniques and algorithm design, using personalized instructional methods to enhance their understanding and skills.
- Formulated curriculum and supervised students during coding labs (5 hours/week), providing direct support and feedback on assignments, projects, and challenges to ensure hands-on learning and skill development.

## PROJECTS

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2048 AI Game Solver | Python, NumPy, Jupyter Notebook

- Built an AI solver for the 2048 game using ExpectiMax and Minimax with Alpha-Beta pruning, enabling comparative analysis and optimizing move selection, achieving a 98% success rate.
- Designed multi-heuristic evaluation function combining empty space analysis, adjacency scoring, and monotonic patterns, improving game performance through weighted feature engineering.

Fashion-MNIST Classifier | Python, TensorFlow, Keras

- Developed convolutional neural network in TensorFlow/Keras featuring progressive feature expansion, ReLU activations, and softmax classification for Fashion-MNIST dataset.
- Implemented ML workflow including data preprocessing, model training with TensorBoard logging, and systematic performance evaluation across 10 training epochs.

Office Network Deployment | Ubiquiti UniFi Stack

- Engineered network infrastructure to replace unreliable systems that caused 15+ hours of monthly downtime, impacting 50+ employees productivity.
- Achieved 99% uptime and eliminated multi-day outages through strategic UniFi deployment with advanced firewall configuration, VLANs, and automated monitoring.