

Roberto Lozano

Software Developer

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PROFILE

Full-stack software developer with 3+ years of professional experience building React-based web applications and production systems. Graduate research in NLP and machine learning covering recommendation systems, sentiment analysis, and word embeddings, with recent applied work building agentic development workflows using Claude Code, including custom subagents and parallel agent orchestration.

PROFESSIONAL EXPERIENCE

- Software Developer, IntraSync Industrial (Contract)** Dec 2025 – Jul 2026 | Remote
- Built and maintained a full-stack web portal managing the end-to-end construction panel pipeline, from estimating and production to inventory, shipping, and accounting, using React, FeathersJS, Node.js, and PostgreSQL.
 - Managed deployment infrastructure using Docker and Portainer, maintaining containerized API and web service builds on Azure DevOps.
 - Collaborated directly with clients to gather requirements, surface edge cases, and iterate on features based on real-world feedback.
 - Shipped production-ready features across the full stack including dynamic dashboards, metric visualizations, and QC workflow tooling.
 - Implemented WebSocket-based real-time features to keep data in sync across concurrent user sessions within internal tooling.
 - Built custom Claude Code subagents with defined roles, tool scopes, and isolated context windows for specialized tasks including code review, test authoring, and codebase exploration, alongside custom slash commands for repeatable workflows.
 - Scoped features in planning mode before implementation, ran parallel agents across independent workstreams on isolated git worktrees, and verified UI changes through Playwright browser automation, reviewing all generated code before merge.
- FullStack Software Developer, Walters & Wolf** Aug 2021 – Feb 2024 | Fremont, CA
- Led development of React-based internal web tools, independently managing front-end systems and contributing to backend tasks including PostgreSQL database updates, schema changes, and API routing.
 - Built and maintained shared component libraries, improving reusability and consistency across teams and reducing developer onboarding time.
 - Introduced Storybook documentation for React component libraries and implemented Jest unit tests, improving code quality & team efficiency.
 - Led stakeholder communications, gathered feedback, and delivered prioritized software updates to keep tools aligned with business needs.
 - Collaborated on Azure DevOps CI/CD workflows, ensuring reliable deployment pipelines and version control integrity.

EDUCATION

- Master of Science - Computer Science And Engineering, Santa Clara University** Sep 2023 – Jun 2025
- Bachelor of Science - Computer Science, University of California Davis** Sep 2016 – Jun 2021

SKILLS & CERTIFICATIONS

- Programming Languages & Libraries**
JavaScript/TypeScript, Next.js, Python, HTML/CSS, C, C++, React, React Native, Node.js, Express, MobX, WebSockets, TensorFlow
- Tools & Platforms**
PostgreSQL, MySQL, Docker, Portainer, Azure DevOps, Storybook, Git/GitHub, Jest, Figma, Webpack, Unix, Claude Code, Playwright
- AWS Certified Cloud Practitioner**
- Gates Millennium Scholarship**

PROJECTS

- Improving Medical Terminology With Word Embeddings, <https://github.com/robertolozano/WordEmbeddingTranslation>**
- Improved English-to-Spanish medical term translations by aligning FastText embeddings with Orthogonal Procrustes Analysis, achieving higher semantic accuracy than Google Translate.
 - Built a bilingual dictionary and evaluated translation accuracy via BLEU scores, showing meaningful improvements over automated methods.
 - Visualized word embedding transformations using t-SNE to validate semantic alignment.
- Probabilistic Latent Semantic Analysis Implementation, <http://github.com/robertolozano/Probabilistic-Latent-Semantic-Analysis-Implementation>**
- Implemented the Expectation-Maximization algorithm to uncover latent topics from a term-document matrix, enabling text analysis and clustering.
 - Built a Python pipeline for text preprocessing including tokenization, stop-word removal, and vocabulary construction.
 - Evaluated model performance via log-likelihood convergence and validated topic extraction with top terms per topic.
- Sentiment Analysis with Neural Networks and TF-IDF, <https://github.com/robertolozano/Sentiment-Analysis-with-Neural-Networks-and-TF-IDF>**
- Trained a PyTorch neural network for sentiment analysis, using TF-IDF vectorization and k-fold cross-validation to ensure robust predictions.
 - Preprocessed text data with bi-grams and stop-word removal to generate effective numerical features, enhancing model performance.
 - Designed a multi-layer neural network with dropout regularization, validated on unseen data, and saved predictions for deployment.
- Collaborative Filtering Recommendation System, <https://github.com/robertolozano/Collaborative-Filtering-Recommendation-System>**
- Built a recommendation system using user-based, item-based, and variance-based collaborative filtering methods, integrating Inverse User Frequency (IUF) and variance adjustments to improve prediction accuracy on sparse datasets.
 - Designed similarity metrics such as Cosine Similarity, Pearson Correlation, and Adjusted Cosine Similarity to enhance model precision, and combined predictions from multiple methods for consistent performance across datasets.
 - Processed and analyzed large datasets efficiently using Python and NumPy, validating the system through extensive testing on multiple datasets.