

Bennett Bishop

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WORK EXPERIENCE

AI Engineer

Jan 2025 - Present

UCSB Cheadle Center for Biodiversity and Ecological Restoration

Santa Barbara, CA

- Saved 2000 person-years in taxonomy research by indexing thousands of pages of domain specific literature, architected a multimodal RAG chatbot using Langchain, GPT-4, CLIP embeddings and QDrant vector database.
- Mentored a team of 5 researchers, taught fundamentals of NLP and information retrieval to team and lab directors.

Machine Learning Engineer (Intern)

Aug 2024 - June 2025

UCSB Alumni Association

Santa Barbara, CA

- Decreased manual processing time by 150+ hours annually (98% reduction) by engineering an HTML content standardization system using Python, BeautifulSoup, and GPT-4, with an intuitive user interface for company interns.
- Applied prompt engineering with example-based pattern matching, achieving a BLEU score of 0.7.

Full-Stack Software Engineer

Jun 2023 - Nov 2024

Brainsink

San Francisco, CA

- Engineered a collaborative PDF annotation platform enabling teams to share documents with threaded discussions, implemented a TypeScript/React frontend and AWS S3/GraphQL/PostgreSQL backend with 25+ API endpoints.
- Reduced information retrieval time by 85% by deploying a RAG chatbot with user + project specific memory, indexing documents with OpenAI embeddings, allowing users to query and extract insights from project materials.

Software Engineer (Intern)

Dec 2022 - Sep 2023

Amotions AI

San Francisco, CA

- Secured initial business client by implementing a critical feature enabling users to review questionnaire responses.
- Migrated 70% of the site from a no-code platform to React/Typescript, built an XML sitemap enhancing SEO by 80%.

EDUCATION

University of California, Santa Barbara

June 2025

B.S., Statistics and Data Science; B.A., Philosophy; Certificate, Technology Management

Santa Barbara, CA

Relevant Coursework: Venture Capital, Business Strategy, Marketing, Data Structures & Algorithms, Time Series, Regression Analysis, Machine Learning, Philosophy of Computing & AI

PROJECTS

IV Pizza Pub Computer Vision (CV) Model

Jan 2025 - Apr 2025

Roboflow

- Trained a CV model to detect and classify 12 pizza types from security footage for a high-traffic pizzeria, offering solution to ~\$50,000 annual revenue loss due to unavailability of preferred slices.
- Planned pipeline for data collection, labeling, training, and UX design to position the model for production use.

Internal Employee Request Text Classifier

Dec 2024 - Jan 2025

TensorFlow and Keras; Fine-tuning DistilBERT

- Automated routing of employee requests to proper departments (HR, IT, Finance, Marketing) with 99% accuracy by fine-tuning an LLM using TensorFlow and Keras, eliminating time wasted finding correct contacts.
- Reduced training time by 18% and reduced trainable parameters from 67 million to 1 million through Low-Rank Adaptation (LoRA) fine-tuning.

SKILLS

SWE: Javascript/TypeScript, Next.js, Node.js, React, TailwindCSS, Python (NumPy), FastAPI, SQL, GraphQL

ML / AI: PyTorch, TensorFlow, Scikit-learn, R, Roboflow, LangChain, Pinecone, FAISS, LlamaIndex, ChromaDB, ML Algorithms (SVMs, PCA, XGBoost), NLP, RAG, GenAI, Deep Learning Algorithms (MLPs, CNNs, LLMs)

Infrastructure: Docker, Kubernetes, AWS, GCP, PostgreSQL