

Bennett Bishop

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WORK EXPERIENCE

AI Research Engineer

Jan 2025 - Present

UCSB Cheadle Center for Biodiversity and Ecological Restoration

- 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 - Present

UCSB Alumni Association

- 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

- 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.
- 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.

Front-End Software Engineer Intern

Dec 2022 - Sep 2023

Amotions, Inc.

- 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

PROJECTS

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 a text classification model 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.

UFC Machine Learning Project

Apr 2024 - Jun 2024

Scikit-learn and R; Various ML Algorithms

- Predicted UFC match outcomes with 80% accuracy by developing Logistic Regression, Linear Discriminant Analysis, Random Forest, and K-Nearest Neighbors models using 10-fold cross-validation.
- Built an interactive Python app with Scikit-Learn, combined datasets for individual fighter profiles with historical fight data, used prompt engineering to create data-driven explanations of fight outcome predictions to users.

LEADERSHIP EXPERIENCE

Director of Events at Data Science UCSB (Jun 2024 - Present)

Eagle Scout at BSA (Dec 2019)

SKILLS & COMPETENCIES

Languages/Libraries: Python (PyTorch, TensorFlow, Transformers, Scikit-learn), R, SQL, JavaScript/TypeScript, React

Competencies: Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG), Machine Learning Algorithms, Deep Learning Algorithms (i.e., MLPs, CNNs, LLMs)