

Soren Larsen

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EDUCATION

• University of California, Santa Cruz

Santa Cruz, CA

M.S. in Natural Language Processing, December 2025

B.S. in Computer Science, June 2023

SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, Dart, Java, C/C++, Swift, SQL, Bash
- **Machine Learning and AI:** PyTorch, scikit-learn, Hugging Face Transformers, LangChain, AutoGen, CrewAI, spaCy, NLTK
- **NLP Techniques:** Token Classification, Sequence Labeling, Slot Tagging, NER, Relation Extraction, Prompting (Few-Shot, Cloze, Instruction), Fine-Tuning, RAG, GloVe, TF-IDF, Bag-of-Words, N-grams
- **Frontend/Backend Tools:** React, Flutter, Node.js, Flask, Express.js, Firebase, Docker, REST APIs
- **Development Practices:** Agile (Scrum), TDD, CI/CD, Prompt Engineering, Barista, XCTest, Espresso
- **Cloud & Infrastructure:** Google Cloud Platform (GCP), Firebase, Docker, GitHub Actions, ChromaDB

EXPERIENCE

• Data & Full Stack Engineer

June 2025 – Present

Gray Whale

Remote

- **Backend Systems & Automation:** Supporting the development of internal tools, automation systems, and backend pipelines for Gray Whale's AI products.
- **Infrastructure Design & Tooling:** Contributing to core systems involving data processing, source code, communications, and marketing tech infrastructure.
- **Cross-Disciplinary Support:** Working across technical and creative domains to assist in product development, scalability, and team workflows.

• AI Engineer & Product Consultant

May 2025 – December 2025

Onda Sports

Remote

- **LLM-Powered Assistant Development:** Worked on intelligent assistant features to help surfers, focusing on forecasting, recommendations, and usability.
- **Observability & Debugging:** Enhanced system observability and troubleshooting with LangSmith, improving reliability and iteration workflows.
- **AI Research & Prototyping:** Experimented with prompt engineering and retrieval techniques to evaluate potential product directions.
- **Marketing & Growth Collaboration:** Contributed to early marketing strategy, outreach initiatives, and intern hiring to support community efforts.

• Software Developer & Consultant — Agile Methodology Specialist

April 2024 – June 2025

Boardal

San Diego, CA

- **Full-Stack Product Development:** Contributed across the stack to expand app functionality and support the growth of Boardal, a surf gear marketplace platform with over 20,000 users. Led feature development with a focus on usability, scalability, and performance.
- **GPT-Powered Marketing Automation:** Built and deployed custom GPT tools to streamline marketing outreach, automate customer communication, and integrate with spreadsheet systems for real-time team collaboration.
- **Agile Transformation and Team Enablement:** Led adoption of Agile methodologies to improve cross-functional collaboration, speed up release cycles, and align development efforts with user feedback and business goals.

PROJECTS

• NLP for Research – Capstone with CarbonBridge

May 2025 – Present

Baskin Engineering, UCSC — Partner: CarbonBridge

- **NLP-Powered Research Acceleration:** Designing a modular NLP system that automates literature triage and scientific vetting, accelerating CarbonBridge's R&D in microbial methanol and bioreactor innovation.
- **Knowledge Graphs & Structured Pipelines:** Built a dynamic knowledge graph pipeline using GraphQL and Dgraph to extract, represent, and query claims, citations, units, baselines, and methodological red flags from research papers.
- **Scientific Document Parsing and Critique:** Integrated LLMs and vetting modules to assess methodology rigor, citation quality, and experimental reproducibility in domain-specific literature (e.g., gas fermentation).
- **Academic-Industry Collaboration:** Project bridges NLP research with cleantech application, supported by CarbonBridge's experts and aligned with standards from ARPA-E award-backed workflows.
- **Link:** santacruzworks.org/news/...research-partnership

• EduMUSE – AI-Powered Modular Study Assistant

May 2025 – June 2025

UCSC Silicon Valley Extension — Team Project

- **AI-Driven Learning Companion:** Developing a modular study assistant that supports summarization, quiz generation, podcast-style reviews, Q&A, and web search to enhance student understanding.
- **Multi-Agent Orchestration:** Using CrewAI to coordinate specialized agents for tasks like retrieval, reasoning, generation, and content pacing across a shared learning context.
- **Personalized and Extensible Design:** Built for adaptability across learning styles — including interactive tutoring, content review, and custom assessment — via pluggable modules.
- **Team Collaboration:** Working in a small team to design, prototype, and test an educational tool grounded in real academic needs and scalable AI pipelines.
- **GitHub:** github.com/iamsoren1/EduMUSE