

KENTARO VADNEY

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TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL

AI & NLP: LLMs, Computational Linguistics, NLP, PyTorch, Text Processing, Semantic Search, Language Models

Linguistics: Japanese Phonetics & Phonology, Morphological Analysis, Text Normalization, Translation & Localization, Technical Writing, Dialectology, Sociolinguistics, Kuzushi-ji Analysis

Frameworks: FastAPI, React, Node.js, Flask, Django, Angular

Cloud & Databases: AWS, Docker, Kubernetes, Terraform, PostgreSQL, MySQL, MongoDB

EDUCATION

University of California, Berkeley

Aug 2019 – May 2023

B.A., Computer Science

REGENTS' & CHANCELLOR'S SCHOLAR

NATIVE JAPANESE SPEAKER

Research Focus:

Computational Linguistics | NLP | Japanese Linguistics | Distributed Systems

LINGUISTIC & RESEARCH EXPERIENCE

Computational Linguistics Researcher & Translator @ UC Berkeley Bancroft Library

Nov 2019 – May 2021

- Applied computational linguistics techniques to analyze and transcribe 86-page historical Japanese scrapbook in cursive kuzushi-ji, identifying dialectal variations and temporal linguistic shifts using Python-based text processing and phonetics expertise
- Developed NLP text normalization protocols converting archaic orthography to modern Japanese (gendai hyouki), creating metadata schemas for lexical entries, prosodic features, and dialectal markers
- Performed morphological analysis and part-of-speech identification with homograph disambiguation using computational methods, establishing classification systems for honorifics, particles, and conjugations
- Managed lexical and phrasal transcriptions with kanji readings, hiragana transliterations, vocalized readings (yomikudashi), and Chinese pinyin for kanbun texts, producing technical writing documentation
- Designed transcription quality evaluation experiments using SQL databases for linguistic data management, cross-referencing kuzushi-ji dictionaries and collaborating with linguistics faculty to validate interpretations

Technical Writing & Localization Specialist @ Genero Inc

May 2020 – Sep 2020

Produced bilingual technical writing and documentation translating marketing automation specifications, API documentation, and Drupal 9 articles between English and Japanese. Applied computational linguistics principles to localize pitch deck presentations, adapting content for Japanese business audiences while maintaining technical accuracy across marketing and technical domains.

AI & NLP Research Assistant @ UC Berkeley Haas School of Business

Jan 2021 – Jun 2021

Conducted quantitative analysis using Python and SQL for NLP-based classification and entity extraction from employment datasets. Developed automated text preprocessing pipelines for sentiment analysis and skills identification in job descriptions using computational linguistics methods.

SOFTWARE ENGINEERING EXPERIENCE

Full Stack Software Engineer @ Centigrade

Apr 2025 – Aug 2025

- Created AI-powered search and document indexing system using LLMs and AWS Kendra with Python, implementing NLP-based semantic search and automated text summarization for technical writing content
- Led FastAPI backend development with optimized SQL database queries supporting 100 transactions/month and redesigned React.js/Tailwind frontend reducing page load time by 50%

Founding Full Stack Software Engineer @ CarbonSustain

May 2024 – Dec 2024

Led architecture and development of blockchain-based data system from prototype to MVP using Python, building Node.js backend with FastAPI integrations. Integrated Angular/TypeScript frontend with PostgreSQL server using SQL queries and designed AWS infrastructure (EC2, S3, CloudFront, Terraform) to support production deployment.

R&D Software Engineer @ Belden

Jul 2023 – May 2024

Developed LLM-based AI tools and container ingress features with Python, Java, REST APIs, and Kubernetes for cybersecurity applications. Re-designed AI models to expand data coverage and optimized EDA workflows processing 200+ GB datasets using SQL, Dask, and machine learning frameworks.

Distributed Systems Researcher @ UC Berkeley RISE Lab

Aug 2021 – Dec 2021

Led 5-person research team analyzing distributed consensus protocols using Python, co-authoring published technical writing on communication efficiency optimization through simulation of replicated state machine traffic.

Full Stack Intern @ Astar Network

May 2021 – Aug 2021

Published bilingual technical writing and documentation in English and Japanese for blockchain developer tools, demonstrating computational linguistics expertise. Built Discord bot integrated with blockchain APIs using Node.js, TypeScript, and Python.