Nikki Phach

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Skills

Python, JavaScript/ Typescript, React, HTML, CSS, Java, C, Racket, LaTeX, SQL, database design, machine learning, Git, unit testing, web scraping, XState, NumPy, pandas, zod, Vitest, scikit-learn, data processing/ visualization, responsive web design, APIs

Education

University of Massachusetts Boston   May 2024
 B.Sc in Computer Science

Supervised Machine Learning: Regression and Classification   January 2024
 Coursera (DeepLearning.AI, Stanford University)

Projects

Kotoba Tag!   github.com/nphach/kotoba-tag
- Wrote a Python scraper to build a Japanese vocab dataset of >5000 words and >7000 definitions.
- Organized data in a Turso database with a structured schema modeling vocab-definition relationship.
- Defined a state machine for gameplay using XState.
- Developed syllable-matching logic in Typescript according to game rules with Vitest unit tests.

Personal Website   nphach.github.io
- Created website hosted on GitHub with a responsive design using TypeScript, TailwindCSS and HTML.
- Used React hooks to create cursor-trailing animation in hero.
- Implemented contact form with zod validation and EmailJS API.

Image Analysis: Skin Detection   Spring 2024
- Researched color analysis in skin detection, color spaces and techniques in dynamic thresholding.
- Enhanced existing Python algorithm by refactoring for improved readability, ease of use and relevance.
- Implemented asyncronous image processing for decreased runtime.
- Contributed to a dataset of skin-mask images used for testing.
- Created Metrics class to calculate algorithm performace, yielding a skin detection accuracy of 98%.

AI Gesture Recognition for Naval Operations   Fall 2023
- Processed hand gesture data using pandas and numpy to generate insight features for classification.
- Compared and presented classification model performance in a collaborative Jupyter notebook.

Work Experience

Waitress and Line Cook   2015 - 2024
Newport Creamery, Mokban Korean Bistro, Balance Patch
- Communicated actively with customers and staff to ensure customer satisfaction and timely service.
- Managed workflow by prioritizing tasks by urgency and importance to enhance efficiency
- Used conflict-resolution techniques to maintain a positive atmosphere in high-stress situations.