

SETAYESH MONTAZERI

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EDUCATION

University of California San Diego

Data Science, Cognitive Science | GPA: 3.6/4.0

La Jolla, CA

Expected Graduation: June 2029

CERTIFICATIONS

Programming and Development in Wolfram Language, Wolfram Language Programming Fundamentals, Practical Programming with Wolfram Language

EXPERIENCE

Student Researcher

Wolfram Summer Research Institute

June 2026 – July 2026

Bentley University, Waltham, Massachusetts

- Researched, developed, and built Chrysalis, a self-scaffolding data science agent utilizing Wolfram Language for CAG (including data visualization) and scaffolding for RAG
- Published a **Computational Essay** on Wolfram Network that received the "Staff Pick" award
- Gave a 2 minute presentation to WSRI researchers and staff, as well as participated in a poster session for Wolfram Institute researchers

Logistics Lead (Hackathons Team Board Member)

Data Science Student Society (DS3)

October 2025 – Present

La Jolla, CA

- Organized end-to-end logistics for a 450+ participant hackathon while collaborating with cross-functional teams (Marketing, Finance, Merchandise, etc); ensuring seamless execution of a 36-hour large-scale technical event
- Optimized event infrastructure to reduce unpredictable potential complications while making on-site calls to improve check-in efficiency
- Member of UC San Diego's Women in Computing (WIC).

PROJECTS

Chrysalis: Iridescence: Self-Scaffolding Data Science Agent

- Engineered a hierarchical data science agent combining LLM planning, Jev-based task routing, and dynamically spawned specialist agents, integrating DataMarshal for automated data preparation.
- Implemented a self-scaffolding engine that generates and tests Python tools and analytical workflows in isolated runtimes, validating new capabilities before adding them to the agent's reusable skill library.
- Built a versioned skill registry with semantic retrieval and Jev-based tool selection to reuse validated capabilities across datasets, exposing analysis artifacts and execution history through a custom workbench UI.

Transparensa: Open & Crowd-sourced Microplastic Analytics

- Analyzed water-sample data stored on AWS, combining detection results with collection location, time, and water type to develop visualizations of geographic patterns in microplastic detections
- Integrated ocean-sample observations with Scripps ocean-current data to estimate potential microplastic transport and visualize movement from sampling locations
- Prepared microscopy image datasets collected through a custom sampling apparatus and contributed to training a FOMO object detection model in Edge Impulse for automated microplastic screening

DataMarshal: Fast Data Wrangling Using Jev

- Developing an automated data wrangling pipeline combining LLM planning, Jev contextual decisions, and vectorized pandas/NumPy execution to accelerate data preparation and reduce manual effort.
- Designing context-aware routing for schema matching, parser selection, and escalation of ambiguous cases, supported by independent validation and reproducible transformations.
- Defining benchmarks for end-to-end latency, throughput, cost, and semantic correctness to evaluate pipeline performance and automation quality.

LANGUAGES

English & Farsi (native/bilingual) | **Japanese** (professional working) | **Mandarin** (limited working) | **Korean** (elementary)

TECHNICAL SKILLS

Languages: Python, Wolfram Language

Frameworks & Libraries: pandas, NumPy

Databases: PostgreSQL

Tools & Platforms: GitHub