

# Francis Padua

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## EDUCATION

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**University of California, Irvine**  
*Bachelor of Science in Computer Science*

Irvine, CA  
*Present – Jun. 2028*

**Fullerton College**  
*Associate's in Computer Science*

Fullerton, CA  
*Sep. 2023 – Jun. 2025*

## EXPERIENCE

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**Embedded Computer Science Tutor**  
*Fullerton College*

January 2025 – Present  
*Fullerton, CA*

- Embedded in C++ Programming courses: attend lectures to assist with in-class activities, host 2 weekly tutoring sessions, and coordinate with the professor on topics, pacing, and review focus.
- Improved code correctness and readability for 30+ students per semester by emphasizing step-through debugging, test scaffolds, and a consistent style guide, leading to fewer regrade cycles and cleaner submissions.
- Prepared targeted exercises that helped students visualize arrays, pointers, and basic data structures through short, fun, and iterative challenges.

**Undergraduate Researcher**  
*California State University, Fullerton*

May 2025 – June 2025  
*Fullerton, CA*

- Screened 9,900+ equity pairs across 5 sectors to find mean-reverting candidates, narrowing to top pairs for backtests by aligning 12 months of prices (225 tickers) and running Pearson correlation + Engle-Granger ADF (Python/statsmodels).
- Cut pipeline runtime and raised reproducibility by splitting duties: Python for yfinance ingestion/cleaning in pandas; C++ for CSV parsing to parallel arrays, correlation, and residual export, then Python for cointegration + simulation.
- Developed the pipeline openly on GitHub, coordinating tasks and code quality with teammates; showcased findings at the CSUF Summer Research Symposium.

**Math & CS Lounge Tutor**  
*Fullerton College*

October 2024 – December 2024  
*Fullerton, CA*

- Supported 100+ students in Data Structures, Intro C++, Calculus, Linear Algebra, Discrete Math, reducing wait times and unanswered questions by prioritizing issues and sharing quick-start templates.
- Increased solve-rate during sessions by teaching decomposition, error-pattern spotting, and whiteboard coding, helping students move from syntax fixes to conceptual mastery.

**Front-End Web Developer**  
*Ena Pragma Consulting*

July 2025 – September 2025  
*Remote*

- Redesigned and modernized client websites for excavation and construction companies, improving SEO rankings and user engagement by implementing semantic HTML, optimized image loading, and responsive layouts.
- Developed front-end interfaces for internal business tools, including a KPI scorecard dashboard that visualized employee and department metrics via heatmaps and interactive data views using JavaScript and React.
- Accelerated prototyping cycles by 40% through AI-assisted development (GPT-4o, Claude, Gemini, Cursor) for code scaffolding, content generation, and UI iteration.
- Collaborated cross-functionally with design and backend teams to align brand identity, performance, and accessibility goals, resulting in faster load times and improved client satisfaction.

## TECHNICAL SKILLS

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**Languages:** Python, C/C++, SQL, JavaScript, TypeScript, HTML/CSS

**Developer Tools:** Git, GitHub, VS Code, Cursor, Jupyter Notebook

**Libraries:** pandas, NumPy, Matplotlib