

Tyler C. Marino

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Overview:

Through professional and academic research, I have been developing skills in sensor fusion, machine learning and visualization to evolve algorithms for large data interpretation and communication. I have a special interest in modeling dynamic systems through spatial-temporal data with multi-modal approaches. I believe that testing against mathematical representations of known interactions will help reduce error and encourage bias to be known.

Education:

Universite Paris – Saclay

Master's degree: *Computer Science, Artificial Intelligence*

Saclay, France

August 2026

University of California, Berkeley

Bachelor of Arts: *Applied Mathematics Emphasis in Data Science*

GPA: 3.50

Berkeley, CA

May 2024

Technical Experience and Academic Projects:

Marker Tracking in Medical Videos (Natural History Museum France):

Mar '26-Present

- Fine-tune deep learning architectures, overcome domain shift and improve transferability across trials
- Test various curriculums with active learning strategies to improve human computer interaction/learning
- Communicate between scientific research groups and computer science faculty to design accessible AI

Staff Research Associate in Data Science (Ruhi Lab UC Berkeley):

[In Prep](#)

Oct '24 – Sept '25

- Develop statistical, probabilistic and neural network frameworks to upsample non-uniform ecological data.
- Dynamic linear models to uncover relationships between species and environment over time and space.
- Review literature, write tests, clean and manage data, present findings at conferences, write manuscript.

Ai for Good (Hult University) + Code4Compassion Hackathon:

[Question-Hour](#)

March '25

- Build news scrapers, generate questions, track responses in Neo4j Database, explore article generation.
- Design functional webpage (React, Flask, js) to visualize response and location data (google places API).

Data Visualization and App Design (Ruhi Lab UC Berkeley):

[Publication](#)

Jan '24 - Oct '24

- Analyze long term spatial temporal variability and trend in 175 sensors measuring 17 species.
- Present relational data sets, associated descriptive statistics, and forecast analysis in an R shiny app.
- Development of new frameworks for population viability analysis in dynamic ecological systems.

Data Lead (Upton Consulting Group):

May '23-May '24

- Oversee technology solutions component for Diversity Equity and Inclusion consulting firm.
- Clean and analyze DE&I survey data, compare confounding variables, and disaggregate data.
- Develop reports communicating data findings, advise next steps for companies 30-5000 employees.

Influence of El Nino on Snowpack and Water Runoff:

Fall '23

- Use open-source data from distributed sensor networks for snowfall, snowpack and soil moisture sensors.
- Optimize Multivariate Auto Regressive models to observe covariate effects across multivariate time series.
- Write a research article and present findings to a group of 40 students and faculty.

Leadership and Volunteering:

Ai for Animals, Lead Volunteer:

March '25

- Managing logistics for a conference on AI algorithms, ethics and agents centered around research.

1% for the Planet, Global Summit Volunteer:

October '24

- Quality assurance for a conference focusing on Sustainable business and collaboration.

Student Representative for UC Berkeley Maps Community of Practice:

Jan '23-May '24

- Facilitate faculty, professionals, and students to learn and discuss mapping practices in various disciplines.

Professional Experience:

The Faculty Club at UC Berkeley (Banquet and Dining Room Server):

Aug '23- May '25

- Fine dining establishment, communicate in Spanish, fill gaps and lead teams in workplace operations.

International House Dining (Lead): UC Berkeley

Feb '22-Aug '23

- Organize shipments (>100 items), operate/troubleshoot industrial machinery, manage staff of 10-15.

Skills:

- **Programming Tools:** Python, R, Java, SQL, Java Script, HTML, CSS, Postman
- **Personal:** Communication, Adaptability, Organization, Creativity
- **Computer skills:** Microsoft suite; Google Suite; Canva; ArcGis

Relevant Coursework:

Data Science for Urban Systems, Social/Graph Data, Knowledge Graphs, Probabilistic Generative Models, Time Series Analysis, Reinforcement Learning, Learning Theory, Advanced Optimization, Computer Vision, Text Mining

Awards and Certificates:

- {Tech: Europe} Paris Hackathon: 3rd Place** **Sept '25**
- Hierarchical AI web agent with semantically encoding subtasks actions avoiding cold starts, reducing credit.
- California Transportation Foundation Scholar** **Fall '23**
- Selected amongst California's top transportation scholars. Only Data Scientist to be invited.
- Top 10 National Steel Bridge Competition (Assembly Team)** **Feb - June '23**
- Design, Fabricate, Construct and assemble Steel bridge. 7th place out of 170+ schools.
- Applied Mathematics School at King Abdullah University of Science and Technology (KAUST):** **Fall '22**
- Research methods in computational fluid dynamics and statistics for large scale data analysis.
- SERC Science Scholar** **Summer '22**
- Participate in discussion and learn best practices for advancement in environmental and spatial computing.

Publications and Presentations:

- T. Marino, K. Stilson, P. Provini. Tracking Movements of Bird Vocalization with Machine Learning. CJCMS Presentation. April 23, 2026
- R. Fournier, T. Marino, A. Ruhi, S. Carlson. Time-varying drivers of phenological change in an estuarine food web. In Prep.
- R. Fournier, T. Marino, S. Carlson, A. Ruhi. Phenology-informed decline risk of estuarine fishes and their prey suggests potential for future trophic mismatches. Ecological Applications. 11/10/2025. doi.org/10.1002/eap.70130
- T. Marino, R. Fournier, A. Ruhi, S. Carlson. Comparing Methods to Upsample Time Series to Capture Fine-Scale Ecological Trends. Interagency Ecological Program (IEP) Workshop Poster Presentation. March 4-5, 2025.
- R. Fournier, T. Marino, S. Carlson, A. Ruhi. Phenology-Informed Decline Risk of Estuarine Fishes and Their Prey Suggests Potential for Future Trophic Mismatches. IEP Workshop Presentation. March 5, 2025.