

# Pedro Henrique Goncalves de Paiva

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## EDUCATION

### Minerva University

San Francisco, CA

August 2023 – May 2027

B.Sc. in Computational Sciences, concentration in Data Science, GPA: 3.84/4

- Relevant Coursework: Algorithms and Data Structures, Modeling Complex Systems, Single & Multivariable Calculus, Computational Methods for Bayesian Statistics, Linear Algebra
- Google Developer Student Club • Goldman Sachs - Engineering Emerging Leaders Series • Residential Instructor, Yale Young Global Scholars (STEM track), Summers 2024–2025

## SKILLS

- **Programming Languages:** Python, C, R, SQL
- **Libraries and tools:** NumPy, pandas, SciPy, matplotlib, PyMC, Jupyter, Git
- **CS:** Algorithms and data structures, dynamic programming, complexity analysis, data modeling
- **Languages:** Portuguese (native); English (fluent); Spanish (intermediate)

## Projects

### Bayesian Modeling of Sports Attendance in Argentina

November 2025

- Built a hierarchical Negative Binomial model in PyMC to forecast stadium attendance by team and weekday
- Used posterior predictive checks and PSIS-LOO to compare pooling strategies and show how forecasts could inform scheduling and capacity planning for clubs and venues

### Genealogy Reconstruction from DNA Strings, CS110 Final Project

December 2024

- Implemented dynamic programming algorithms to compute all Longest Common Subsequences between DNA strings and built an  $N \times N$  similarity matrix over gene sequences in Python
- Designed two genealogy reconstruction algorithms: a greedy local strategy and a global dynamic programming approach that maximizes total similarity, then compared their runtime and scaling behavior

### RememberMe – UC Berkeley Hack for Impact Hackathon

February 2024

- Led a 4-person team to build an AI-assisted memory support prototype in 24 hours
- Integrated TwelveLabs' API & Vespa for AI-powered multimedia conversion and data retrieval with database
- Won in two categories: Best Hack for Quality of Life and Best Use of TwelveLabs API (out of 40 teams)

## EXPERIENCE

### Neuroscience Lab, Universidad Torcuato Di Tella (UTDT)

Buenos Aires, AR

Research Assistant — *MateMarote: Building the Learning & Mood Dataset*

September 2025 – Present

- Writing R and Python pipelines to digitize, clean, and link 15+ years of handwritten mood and learning forms into analysis-ready tables
- Defining the data model and QA rules for the dataset, enabling future mixed-effects modeling and large-scale analysis

### AURA Application Mentorship

Remote, Brazil

Cofounder and Mentor

January 2023 – Present

- Owned the product and curriculum roadmap for AURA's mentorship programs, using student feedback and funnel metrics to prioritize features and content, launching 3 new courses and 11 cohorts
- Contributing to 400+ student acceptances, led the design and rollout of AURA's online teaching platform: defined requirements, prioritized features, and partnered with dev/design to centralize classes and materials

### Minerva University

San Francisco, CA

Teaching Assistant (*Introduction to CS - Formal Analysis 50 and 51*)

August 2024 – Present

- Support more than 200 students in programming, statistics, and simulations by debugging code, reviewing algorithm design, and answering questions during office hours
- Analyzed performance metrics and student feedback to identify pain points and propose curriculum tweaks

### Code2040 Fellows Program

Remote

Fellow

September 2024 – June 2025

- Selected as one of 40 fellows in a 10 month program focused on software engineering and equity in tech
- Built knowledge in Python with industry mentors and practiced data structures, debugging, version control, and code reviews