# Joe Miguel Robertazzi

🌐 jtazzi.com | @ tazzi@stanford.edu | 🔗 linkedin.com/in/jtazzi/ | ⭕ github.com/foxboxxx

## EDUCATION

**Stanford University** — **Palo Alto, CA**
*Candidate for Bachelor of Science in Computer Science* — *Sep. 2023 – June 2027*
**GPA: 3.9 / 4.0**
**Relevant Coursework:** Circuits, Computer Systems, Calculus, Data Structures & Algorithms, Diff. Eq. with Linear Algebra & Fourier Methods, Digital System Architecture, Discrete Mathematics, Operating Systems, Probability, Proof Writing, Linear Algebra & Multivariable Calculus

## SKILLS

**Programming:** C/C++, Java, Python, JavaScript | **Libraries:** NumPy, Pandas, scikit-learn, Matplotlib, Seaborn, PyTorch

## WORK EXPERIENCE

**Stanford University** — **Palo Alto, CA**
*Teaching Assistant, Department of Computer Science* — *Apr. 2024 – Present*
- Conduct weekly 10+ person discussion sections of Stanford's introductory computer science courses CS106A & CS106B
- Oversee biweekly grading sessions with students to review coding errors from assignments, ensuring mastery over material
- Debug code with students 1-on-1 during office hours and graded midterm and final exams alongside other section leaders

**University of Rochester** — **Rochester, NY**
*Independent Student Researcher* — *Jan. 2021 – June 2023*
- Developed a [research project](#) investigating the relationship between Earth's magnetic field and migratory bird patterns
- Conducted innovative analysis of datasets with 50+ million entries through novel map-based data visualizations via Python
- Wrote a professional research manuscript and presented findings; won at national competitions, including Regeneron STS

## PROJECTS

**Legonardo DaVinci – Automated LEGO Image Printer** | *Python, C, Assembly* — *Jan. 2024 – Mar. 2024*
- Designed, built, and programmed a bare-metal device that prints user-loaded images via LEGO blocks
- Developed a complete back-end system in C and Python, leveraging a RISC-V MangoPi for processing
- Rewired and integrated sensors/motors to precisely position LEGO pieces in 4.8mm x 4.8mm slots

**Shell Terminal** | *Assembly, C* — *Jan. 2024 – Feb. 2024*
- Designed and implemented shell terminal with custom commands on RISC-V MangoPi system
- Integrated keyboard input using interrupt handling and a graphical interface via custom-developed graphics library

**Research Project Analyzing Avian Migratory Patterns** | *Python, scikit-learn, Pandas, Seaborn* — *Jan. 2020 – June 2023*
- Developed 100+ interactive geospatial maps using libraries like pygmt and Seaborn to visualize migration data
- Designed and implemented 4 analytical frameworks through Python and scikit-learn to elucidate correlations between bird migration, magnetic fields, and environmental factors
- Identified strong correlations ($r > 0.7$) between declining bird populations and weakening magnetic fields

**Ossining Engineering Club Summer Program** | *PowerPoint, C++, FRC Robotics* — *June 2022 – June 2023*
- Established an 8-week long curriculum focused on C++ fundamentals and object-oriented programming (OOP)
- Empowered financially disadvantaged individuals by holding free weekly classes virtually via Google Meets and Zoom
- Successfully attracted 10+ students per week, with 100% completing a robot design project in CAD/C++

## LEADERSHIP

**Ossining Engineering Club / FRC Team 4122** — **Ossining, NY**
*Vice President & Treasurer* — *Sep. 2019 – June 2023*
- Led programming efforts, earning the team two coding awards and securing a spot in the FRC World Championship
- Coordinated build-season meetings and mentored 45+ members across mechanical and programming departments
- Developed a real-time statistical framework using NumPy to analyze competitor performance and refine playoff strategies

## ADDITIONAL INFORMATION

**Interests:** Running, Hip-Hop/J-Pop, Dystopian Novels, Robotics, Computer Building, Competitive Online Games
**Soft skills:** Adaptable, Analytical thinking, Collaboration, Communication, Decisive, Open-minded, Problem solving