

# Xavier Silva

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## Education

### **Kalamazoo College**

**Bachelor of Arts, 2024**

*Mathematics and Computer Science double major*

GPA: 3.988

**Recognitions:** Honors in Mathematics (*summa cum laude*), Heyl Full Tuition Scholarship, Phi Beta Kappa

### **Relevant Projects:**

#### *Icosahedral Virus Transitions (Senior Thesis)*

- Developed a multi-threaded, high-performance data analysis algorithm in Python to understand how certain viruses transform over time.
- Created comprehensive technical documentation for research mentors to continue research.
- Presented research findings to the Kalamazoo College Board of Trustees.
- Nominated speaker at the 2023 West Michigan Regional Undergraduate Science Research Conference with over 150 in attendance.

#### *HornetHQ 2.0 Prototype*

- Designed and implemented a prototype of an improved course selection website using React, JavaScript, and RESTful APIs.
- Applied Agile methodologies in a team with 12+ people.
- Integrated SQL database queries to simulate back-end operations.

### **Relevant Coursework:**

Advanced Software Development (*Agile development, software testing, SDLC principles*)

Data Science, Machine Learning (*Python, scikit-learn, data analysis, AI models*)

### **Budapest Semesters In Mathematics, Hungarian Study Abroad**

**2022**

- Advanced mathematics program that provides an opportunity for North American students to learn mathematics in the Hungarian tradition.

## Experience

### **Teaching Assistant for Kalamazoo College Mathematics Classes**

**2023 - 2024**

- Created learning environments that encourage student's critical thinking.
- Conducted weekly independent office hours to guide students towards optimal solutions.
- Graded homework for mathematics classes, required working closely with professors.
- Delivered accurate and concise feedback to over 20 students, facilitating significant improvements in mathematical proof writing.

### **Mathematics Departmental Student Advisor at Kalamazoo College**

**2023 - 2024**

- Served as an academic role model by representing the mathematics department in a faculty-appointed position.
- Navigated College systems to provide helpful guidance to peers on course planning, class registration, major exploration, and academic success.

### **Teaching Assistant for Kalamazoo College Computer Science Classes**

**2022**

- Assisted students in computer science labs leading to significant grade improvements.
- Facilitated a learning environment where students were able to discover solutions for themselves by holding weekly independent office hours.

## Skills

**Computer Languages:** Java, C++, Python, HTML, CSS, JavaScript, React, Bash, SQL

**Software Development:** SDLC, Agile, Git/GitHub, Test-Driven Development (TDD)

**Operating Systems & Tools:** Linux, MacOS, Windows, LaTeX, Microsoft Office, Google Suite

**Data Science & Analytics:** scikit-learn, Machine Learning, Data Visualization, R

**Computer Hardware:** Built and repaired multiple personal computers, Computer Networks

## Community Involvement

### **Percussion Instructor at Portage Northern High School**

**2023 - 2024**

- Facilitated a learning environment for over 30 students at a professional level.

### **North American Guild of Change Ringers Member**

**2022 - Present**

- Jeff Smith Young Ringer Award 2024