# Ilay Wischnevsky Shlush

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# **EDUCATION**

#### Tel Aviv University

Tel Aviv, Israel

2nd Year BSc. Student (Physics and Mathematics)

Jan 2024

- Relevant Coursework: Real Analysis 1 (98), Classical Physics 1 (100), Mathematical Intro. for Physicists (96), Linear Algebra 1 (100), Intro to Set Theory (98), Special Relativity (96), Thermodynamics (95)
- Participated in an honors students seminar about Chaos Theory (S. Strogatz)
- Received excellence scholarship

# **HEMDA Schwartz-Reisman Science Education Center**

Tel Aviv, Israel

Physics Major (Inter City Excellence Class) (100/100), Computational Science Major (100/100)

Jun 2023

- Selected for an Advanced Excellence Program
- Relevant Coursework: Special Relativity, Intro. to General Relativity, Intro. to Quantum Mechanics

### Herzliya Hebrew Gymnasium High School

Tel Aviv, Israel

Mechatronics Major (100/100)

Jun 2023

• Relevant Coursework: Arduino Programming, Electrical Circuits, Algorithm Development, Project Management

SAT: 1490 / Psychometric Test: 740

#### EXPERIENCE

# Waves Audio (Waves)

Tel Aviv, Israel

Research Assistant, Software Developer (Intern)

Jun 2021 - Dec 2021

- Conducted measurements on devices to test acoustic properties (temperature's effect on resonance)
- Analyzed resonance graph data using excel and python
- Developed Python code automating the measurement system

#### COMMUNITY AND ACTIVITIES

# Talat - "Students for Students"

Tel Aviv, Israel

Co-founder, Teacher

Sep 2022 - Present

- Helped found an afterschool program where students volunteer as community work
- Taught and mentored students in Physics and Math

# Projects

8080: Automatic Acoustic Drumset

• Engineered and programmed an automatic acoustic drumset using Arduino

Light Curve Inversion

- Programmed a neural network aiming to reconstruct 3D asteroid shapes only from their light curves
- Created a ray tracer to generate lightcurves from asteroid data

Wave Motion in a Non-Uniform Medium

• Simulated waves as they propagate through different non-uniform mediums

Spontaneous Synchronization of Fireflies

• Built a model to study the factors affecting the synchronization of fireflies

Exploit (Game)

- Created a game in Godot as a part of the Godot Wild Jam
- Won 3rd place in an international coding hackathon