

Alexandre de Taunay Voloch

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Education

University of São Paulo <i>Bachelor's degree in Physics (IFSC-USP)</i>	2021-2025 São Carlos, SP
<ul style="list-style-type: none">• Relevant Coursework:• Advanced quantum mechanics• Quantum Information Theory• Computational physics & comp. quantum mechanics (Python, Numpy, Scipy, Pandas, Qiskit)• Neural networks for pattern recognition & modeling• Image processing and analysis• Statistical analysis & computation• Modelling of non-linear and chaotic Systems• Advanced mathematical analysis (calculus I-IV)• Advanced linear algebra	

Technical Skills

Python (advanced): Senior Python developer (10+ years of experience). Experience with quantum computing (Qiskit), neural network development (scikit-learn, keras, tensorflow), scripting (using APIs, requests, etc.), fullstack webdev (Django, Flask), scientific processing & data analysis (Numpy, Scipy, matplotlib, pandas), and image processing.

Other Languages: Fortran (intermediary), Javascript (intermediary), HTML (advanced), CSS (intermediary), SQL (intermediary)

Other Skills: Sysadmin (Windows and Linux), SSH, Cloud Services (DigitalOcean etc.); Mathematical and physics skills; Fast thinking & problem-solving; Able to adapt easily into a team

Language Skills: Portuguese (Native), English (Fluent), German (Intermediary - B2 level), Spanish (Intermediary)

Experience

Scientific Initiation - FAPESP - IFSC-USP <i>Modeling noise in quantum computers using physics-informed neural networks</i>	2024 – 2025 São Carlos, SP
<ul style="list-style-type: none">• Development of quantum circuits using IBM's Qiskit library• Simulation of quantum systems using Qiskit Dynamics• Studied the theory and performed simulations of dynamical decoupling for a transmon system• Development and training of physics-informed neural networks	
Tech lead @ Biffy Açoque Digital <i>Lead developer & project manager</i>	2024 – present Rio de Janeiro, RJ
<ul style="list-style-type: none">• Development of customer service AI agents with tool use utilizing DeepSeek API• Lead development and maintenance of company platform & automation services.• Experience working in the fast-paced and changing environment of a startup.• Scouting and interviewing potential new hires	
Filosofísica USP São Carlos <i>Coordinator & treasurer</i>	2021 – 2025 São Carlos, SP
<ul style="list-style-type: none">• Main coordinator and treasurer of a student-led project• Great experience in developing & doing presentations on a variety of subjects; public speaking	
Freelance Python Developer <i>Programmer, Software Engineer, Project Manager</i>	2014 – present São Paulo, SP
<ul style="list-style-type: none">• Development of API interfaces and online utility chatbots• FullStack Web Developer for many clients, including Brazilian and international companies• Optimization and refactoring of existing (sometimes broken) codebases• Development of backend database interfaces (MySQL, Postgres, MongoDB, Airtable)• Blockchain development	