

# Alexandre de Taunay Voloch

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## Education

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

## 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

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