Juan José Alonso

Software Engineering Student

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Profile

Proactive Software Engineering student with a strong foundation in AI Engineering, Machine Learning, and Agent Development. Proven ability to deliver impactful solutions, including developing a GenAI-powered agent that reduced product review time by 89% at Cencosud. Passionate about leveraging cutting-edge technologies to build user-centric products that align business goals with market needs. Skilled in both technical implementation and effective communication to ensure seamless project execution.

Education

BSc Software Engineering *(Pontificia Universidad Católica de Chile)*   **Santiago, CL** *2021-2026 (Expected)*

Relevant Courses: Artificial Intelligence, Data Structures and Algorithms, Recommender Systems, Data Mining, Detailed Software Design, Databases, Web Technologies and Applications

Experience

Software Engineering for AI Applications Intern *(Cencosud S.A.)*   **Santiago, CL** *01/2025 - 03/2025*

- Developed and deployed a Retrieval-Augmented Generation (RAG) agent leveraging GenAI to automate compliance reviews of marketplace products for Paris Marketplace, enhancing review scalability and accuracy.
- Reduced average product review duration from 18 to 2 days (∼89% improvement), significantly increasing operational efficiency and accelerating time-to-market.

Researcher *(Engineering School @ UC Chile)*   **Santiago, CL** *07/2024 - Present*

- Contributed to a research project evaluating the capabilities of Large Language Models (LLMs) for secure code review automation.
- Analyzed and labeled thousands of real-world GitHub commits and code reviews to build a synthetic dataset for LLM evaluation.
- Co-authored a paper titled *Improving Automated Secure Code Reviews: A Synthetic Dataset for Code Vulnerability Flaws*, published as an arXiv preprint and submitted to MSR 2025 – Registered Reports. https://arxiv.org/abs/2504.16310

TA @ Artificial Intelligence *(Engineering School @ UC Chile)*   **Santiago, CL** *07/2024 - Present*

- Served as a teaching assistant for the course in both the second semester of 2024 and the first semester of 2025, contributing to the academic support and development of students.
- Conducted several classes for 160 students on the fundamentals of artificial intelligence, including ASP, SVM, Gradient Boosting, and Decision Trees.
- Created exams, assignments, and quizzes, which I also graded, to assess student performance.

Intern *(Williamson Industrial S.A.)*   **Santiago, CL** *07/2024 - 08/2024*

- Automated the creation of multiple sales reports for use in board meetings.

TA @ Engineering Challenges *(Engineering School @ UC Chile)*   **Santiago, CL** *03/2022 - 07/2022*

- Supervised a group of 90 students through a crucial, early-stage engineering course in our Engineering School.
- Mentored three student groups throughout the semester, culminating in one group winning first place and another second place at the project fair, which featured 900 competitors.
- Received a flawless performance review, highlighting exceptional leadership and organizational skills

Skills & Languages

Programming Languages: Python, C#, C, JavaScript, Ruby, SQL, R, Clingo (ASP), Wolfram Language
Frameworks: Django, FastAPI, Flask, LangChain, LangGraph, Mage AI, PyQt, Ruby on Rails, .NET, Tailwind CSS
Machine Learning: PyTorch, scikit-learn, TensorFlow
Data Viz & Tools: Pandas, Power BI, R Studio, AWS, Git, Docker, Redis, LaTeX, Postman
Languages: Spanish (Native), English (Native - C2), Catalan (Intermediate)