

Axel Jaquez

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Education and languages

University at Albany, Albany NY

Informatics (BS) with a concentration in software development

Expected Graduation (December, 2025)

- Proficient In English
- Proficient in Spanish
- Beginner in french

Relative Work Experience/University Project

AI Research Assistant Intern

University at Albany, Albany NY

(01/2025-06/2025)

- In a team, develop and program artificial intelligence models to enhance real-world applications in safety and creative fields.
- Contribute to the "Drone Guard" project, integrating AI into drones for real-time weapon and threat detection.
- Work on fine-tuning prebuilt AI models for screenwriting, enhancing their ability to generate high-quality scripts.
- Assist in building a generative AI pipeline that integrates text, image, and video creation for AI-driven filmmaking.
- Conduct research and development to improve AI model accuracy, efficiency, and real-world applicability.
- Collaborate with a team of researchers and engineers to push the boundaries of AI in security and entertainment.

Software Developer Research Intern

University at Albany, Albany NY

(08/25- present)

- In a team, Design and develop a web application catering to publication of people's dissertations.
- Optimize the application for a simple user experience by having it be tested by several people (50 survey).
- Conducted test on the performance of the website to make sure it can perform on several different scenarios.
- Integrated a seamless but aesthetically pleasing design on the website to make it more interactive with users.
- Use collected data from gathered research and input it in the web application to display information from dissertation's on the site.

Regeneron (Contracted Security)

Rensselaer, NY

(05/2024-present)

- Inspect buildings and compute data points for each building in a data system that alerts supervisors if a building needs to be readjusted.
- Comply with all current IOPS cGxPs (e.g., Good Manufacturing Practices, Good Documentation Practices, etc.).
- Perform all tasks required for work completion per approved standard operating procedures (SOPs).
- Comply with all IOP's Environmental, Health & Safety policies/procedures associated with the tasks to be performed.
- Revise data points to make sure they're well accounted for and report or help fix any mistakes in the data system.

Document Translator (Project)

University at Albany, Albany NY

- Develop a secure document and word translation application to eliminate language barriers in research and academic environments.
- Collaborate with a team to design an AI-powered translation tool tailored for researchers, students, and non-English speakers.
- Implement privacy-focused features to ensure users can translate sensitive documents, such as tax forms, without exposure risks.
- Integrate advanced natural language processing (NLP) models to enhance translation accuracy and contextual understanding.
- Optimize the application for a seamless user experience, making document translation efficient and accessible.

Conduct testing and refinement to improve model performance, ensuring accurate and secure multilingual document translation.

Protein Structure Analysis (Project)

University at Albany, Albany NY

- Retrieved protein sequence and structural data from UniProt and the Protein Data Bank (PDB) using Biopython.
- Implemented Python scripts to calculate amino acid composition and analyze sequence properties of hemoglobin.
- Created data visualizations with Matplotlib to display amino acid frequency and sequence characteristics.
- Generated and examined 3D protein structures using PyMOL to understand structural features.
- Documented workflow in a Jupyter Notebook via Vscode, showcasing reproducible bioinformatics analysis and visualization.

Professional Skills

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|---------------------------|-----------------------------|-------------------------|-----------------------|
| • HTML/CSS | • SQL | • Excel/powerpoint/Word | • Critical Thinker |
| • JavaScript | • Visual Studios code | • JMP (basic) | • Great Communication |
| • python(flask) | • Code Version Control | • attentive to details | • Time Management |
| • Git/GitHub | • Debugging | • Team Advocate | • Organized |
| • Artificial Intelligence | • Software Design & Testing | • problem solver | • Adaptability |