Aaron R. Beschorner Lira

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EDUCATION

University of Florida, B.S in Computer Science, Minor Electrical Engineering (Graduating Spring 2026) Gainesville, FL

- Relevant Course Work: Data Structures & Algorithms, Software Engineering, Operating Systems, Project August 2024 - May 2026 Management for Engineers, and Machine Learning Engineering, Digital Logic, and Databases Management.
- Key Achievements: Dean's List, Latin American and Caribbean Scholarship (LAC), and STEM Strategic Waiver Scholarship.
- Member: OpenSource Club, Venezuelan Student Association (VENSA), and UF LGBTQ+ Mentorship Program.

TECHNICAL SKILLS

- Programming Languages: Assembly, C (C11–C17), C++, Python, Bash, VHDL, HTML5, CSS3, and JavaScript.
- Framework and Libraries: Flask, React.js, Node.js, OpenCV, Mediapipe, PyTorch.
- Databases: MySQL, PostgreSQL, and SQLite.
- DevOps and Tools: Docker, VSCode, IntelliJ IDEA, and Unix/Linux.
- Software and Technologies: LaTeX, Intel Quartus Prime, and Microsoft Office.
- Languages: English (professional proficiency), Spanish (native proficiency).

PROJECTS

Parkinson's Disease Tremor and Motion Analysis | Python, Mediapipe, OpenCV, Pytorch

- January 2025 Present · Automated subtle tremor detection, as measured by real-time processing of hand and body keypoint data from three synchronized camera feeds, by developing a Python state-machine pipeline that integrates MediaPipe, and OpenCV
- Led a 4-member undergraduate team under a Computer Engineering PhD mentor, as measured by on-schedule delivery of a PyTorch-based classifier, by coordinating requirements gathering, data annotation, and code reviews.

Machine Learning-Based Surgical Hand Assessment | Python, DarwinV7, Tensorflow

- Generated a high-quality labeled dataset, as measured by 50 + surgical hand-washing videos annotated with 36 distinct actions per clip (1,800 + total tags), by defining standardized protocols in DarwinV7.
- Engineered an end-to-end data pipeline that processed video at x4 the baseline speed (2 hrs of footage per hr), as measured by throughput benchmarks, by automating parallel frame extraction, augmentation, and batching in Python.

October 2024 - November 2024 Venezuelan Election Tally Sheet Processor | Flask, Python, OpenCV, PostgreSQL, Tesseract

- Digitized 25,575 scanned tally-sheet images with 98% field-level extraction accuracy, by integrating Tesseract OCR and OpenCV preprocessing (adaptive thresholding, noise reduction).
- Boosted QR-code recovery rate from under low-light/poor-quality scans, by developing a custom repair and spot-filling algorithm.

WORK EXPERIENCE

University of Florida	August 2025 – December 2025
Incoming Teaching Assistant Fall 2025 Digital Logic and Computer Systems	Gainesville, FL

University of Florida

Smart Systems Laboratory Undergraduate Research Assistant | Python, OpenCV, Bash, Git

- · Collaborated on two UF Shands Hospital ML research initiatives-Parkinson's tremor analysis and surgical hand hygiene assessment—assisting with data annotation (1,800+ action and tremor segments) and validating model outputs.
- Developed Python scripts to automate basic video-preprocessing tasks (format conversion, frame extraction), reducing manual prep time.

Trader Joe's

Part-time Crew Member and Section Leader

• Managed a department accounting for 7% of total store sales; analyzed daily POS and inventory data to forecast demand and drive next-day ordering decisions, optimizing stock levels and minimizing out-of-stock occurrences.

June 2023 - Present Gainesville, FL

January 2025 - Present

Gainesville, FL

January 2025 - Present