

Nicholas Alejandro

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EDUCATION

University of North Carolina Charlotte, Charlotte, NC

Expected: May 2027

Bachelor of Science in Computer Science

Majors: Computer Science, Statistics

Related Courses: Data Structures and Algorithms, Logic and Algorithms, Backend Design, Frontend Design, Database Design.

WORK EXPERIENCE

Wunderlich-Malec Engineering

Software Engineer Intern

Kernersville, North Carolina

May 24 – Aug 24 / May 25 - Aug 25

- Developed and implemented control and software systems for onsite engineering projects.
- Designed and implemented automation tools that reduced multi-day office tasks to less than 2 hours.
- Built and tested VBA and Python scripts that automate data transfer, validation, and analysis in Excel.
- Designed AI-integrated automation pipelines using Microsoft Power Automate and Azure to streamline information processing and cross-departmental workflows

Apexanalytix

Automation Developer Intern

Greensboro, North Carolina

May 26 – Aug 26

- Engineered automated web scraping pipelines to extract candidate and labor market data from government websites, enabling better client-candidate matching.
- Built data validation workflows leveraging AI to verify accuracy, flag inconsistencies, and surface insights from scraped datasets.
- Streamlined intake of large-scale public data sources, reducing manual data-gathering effort and improving reliability of downstream decisions.
- Implemented intelligent fetch orchestration with multi-source search aggregation and automatic fallback strategy when primary sources fail.

PROJECTS

Prediction Market Trading Bot

Project: TypeScript, Node.js, Kalshi API, WebSocket, SQLite

March 2025-Present

- Built a high-frequency algorithmic trading bot for the Kalshi prediction market, executing an expiry-sniper strategy on hourly/15-minute crypto settlement markets with RSA-PSS-signed REST/WebSocket order flow and sub-second fills
- Engineered risk management with half-Kelly position sizing, a hard equity floor, chop-based dynamic sizing, and consecutive-loss circuit breakers, validated live on a real bankroll rather than simulated results
- Developed a backtesting and validation suite (Monte Carlo, walk-forward, sensitivity analysis) plus shadow-scoring and confidence-calibration tooling to measure fee-adjusted edge before deploying capital
- Designed a two-book-aware execution layer that prices each side as $\min(\text{direct ask}, 100 \times \text{opposite bid})$, recovering from a live pricing bug, and persisted all trades/signals to SQLite (sql.js) for post-hoc P&L analysis

Automated Data Discovery Platform

Project: Python, FastAPI, Redis, LLM APIs

May 2026 - Present

- Built scalable extraction pipelines processing thousands of public records daily using async Python, Redis Streams, and distributed worker architecture.
- Designed AI-powered data validation with LLM-based entity extraction, content classification, and confidence scoring for quality gating.
- Implemented content de duplication and deterministic result caching to ensure reproducible outputs and reduce API costs.
- Containerized services with Kubernetes-native patterns including Prometheus metrics export and structured JSON logging for observability.

SKILLS

- **Programming Languages:** Java, Python, HTML, CSS, JS
- **Technical:** Network Administration, Windows and Linux Administration and Troubleshooting. Rockwell Automation, PlantPAx
- **Developer Tools:** GitHub, VS Code.
- **Operating Systems:** Windows, Linux