

JOHNNY LIEU

Software Engineer

San Diego, CA | (619) 573-8462 | JohnnyLieu@yahoo.com | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

SUMMARY

Software engineer with 4+ years building production Python automation, data pipelines, and internal tooling for a large-scale fleet of autonomous robots. Strong in Python, JavaScript, and SQL, with hands-on experience integrating REST APIs, querying BigQuery, and deploying scheduled services on Linux. Designed an automation that reduced a recurring issue from 300+ support cases per month to zero. Relentless about efficiency, code quality, and continuous learning.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL

Frontend: React.js, HTML5, CSS, jQuery, Responsive Design

Backend & APIs: Node.js, Express, REST APIs, JSON/Ajax, MERN stack, user authentication, Progressive Web Apps

Data & Databases: Google BigQuery, MySQL, MongoDB, SQL data pipelines

Cloud, DevOps & Tooling: Git, GitHub, CI, Google Cloud SDK, Google Workspace APIs (Sheets, Drive), Linux (Ubuntu), systemd, cron, SMTP, virtual environments

Engineering Practices: Workflow automation, scheduled jobs, debugging & troubleshooting, root cause analysis, code review / pull requests, logging & monitoring

EXPERIENCE

Technical Support Engineer II Oct 2025 – Present

Brain Corp — San Diego, CA

- Designed and shipped a Python + SQL automation that detects and corrects a recurring data-integrity issue across a large-scale robot fleet, **reducing a problem that previously generated 300+ support cases per month to zero**; the service runs unattended on a recurring schedule.
- Build and operate internal automation and monitoring tools that query fleet telemetry in BigQuery, flag anomalies, and trigger corrective actions, removing manual steps from daily operations.
- Deploy and maintain scheduled Python services on a Linux server using systemd service and timer units, with centralized logging and automated log rotation.
- Provide engineering-level support across software, hardware, and network domains for large-scale robotic deployments, and perform root cause analysis to prevent recurring issues.

Robot Performance Analyst Sept 2021 – Oct 2025

Brain Corp — San Diego, CA

- Developed and optimized proprietary software for a fleet of autonomous robots using Python, JavaScript, and SQL.
- Built an operator-memo automation system that reads requests from Google Sheets, sends memos to one or many robots through an internal REST API, marks completed rows, and emails confirmations and errors to requesters, replacing a fully manual command-line process.
- Programmed optimal robot routes, ran automated health checks, and troubleshoot performance issues to maintain high-quality fleet coverage.
- Delivered quarterly performance and strategy presentations to management and executives.

Computer System Specialist June 2021 – Sept 2021

Labcorp — San Diego, CA

- Provided technical support for computer systems, websites, and networks; documented and triaged issues in a ticketing system and escalated to field technicians as needed.
- Supported enterprise software and eProducts, including setup, account resets, and end-user training.

Internal Liaison 2019 – 2021

Labcorp — San Diego, CA

- Served as a technical reference within customer service and acted as a liaison between Labcorp and its clients.

SELECTED PROJECTS

- **[AI Docs Bot for Slack Proof-of-Concept](#)** — Proof-of-concept multilingual RAG-based Slack bot that answers questions strictly from approved documentation per channel, with built-in refusal for out-of-scope queries; implemented full pipeline (PDF parsing, chunking, embeddings, semantic search, constrained generation) and channel-scoped knowledge base isolation. *Stack: Python, OpenAI API, Slack Bolt SDK, Git/GitHub.*
- **Data-Integrity Auto-Remediation** — SQL/BigQuery + Python service that identifies fleet sites reporting a critical data fault and automatically triggers the corrective process; cut 300+ monthly support cases to zero. *Stack: Python, BigQuery, SQL, Git/GitHub, CI.*
- **Operator Memo Portal Feature** — Built a React + TypeScript feature in an internal web portal that lets authorized users send predefined memos to field robots through an internal REST API. Implemented permission-based access control, dynamically rendered per-memo parameter forms with input sanitization, duplicate-submission prevention, and error handling that surfaces real backend responses (e.g., 400/403) instead of false success states. *Stack: React, TypeScript, JavaScript, CSS, Axios, REST.*
- **Operator Memo Automation Suite** — Scheduled Python service (main, proactive, camera, and hardware-memo jobs) that sources data from Google Sheets, Google Drive CSVs, and BigQuery, sends operator memos via an internal REST API, and emails formatted summaries; includes duplicate filtering, multi-device handling, date-based scheduling, and error alerting. *Stack: Python, Google Workspace APIs, BigQuery, REST, SMTP.*
- **Proactive Performance Memos** — Weekly BigQuery job that compares expected vs. completed robot routes over a rolling 7-day window, targets underperforming machines, sends memos, and emails a per-machine summary with full API responses. *Stack: Python, BigQuery, REST, SMTP.*
- **Catalog Monitoring Email Bot** — Daily BigQuery monitor that detects missing client data deliveries and emails alerts to stakeholders. *Stack: Python, BigQuery, SMTP.*
- **Automation Infrastructure** — Deployed the above services on a Linux server with systemd service/timer units, a logging wrapper, and automated log rotation, designed as a reusable template for future jobs. *Stack: Linux, systemd, Bash.*

SELECTED RECOMMENDATION

“Johnny demonstrates ownership, grit, and a growth mindset. He stands out for his responsiveness, responsibility, and eagerness to learn. He has shown the ability to quickly escalate potential concerns, propose resolutions, and align with peers and management. His relentless focus on improving efficiency and consistently demonstrating a growth mindset make him an excellent candidate for a software engineering position.”

— Daniel Hoffman, Director of Software Engineering

EDUCATION & CERTIFICATIONS

- **B.S. in Computer Science**, University of Phoenix — Expected 2026. Dean's List, College of Business and Information Technology (first half 2025).
- **Full Stack Web Development** — UCSD Extension Coding Bootcamp.
- **Python: Intro, Intermediate, Data Structures & Algorithms** — UCSD Extension.
- **CS50: Introduction to Computer Science** — Harvard University.
- Planned: M.S. in Artificial Intelligence.