

Nathan Casados

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Employment History

Senior Software Engineer

Feb 2020—Dec 2023

Skyline Solar

Pleasant Grove, UT (Remote)

- Developed a custom integration software solution that eliminated the need for expensive vendor premium subscriptions, resulting in annual cost savings of \$114,000. This not only saved significant financial resources but also provided greater control and flexibility over the integration process.
- Increased uptime of custom integration software by 99.9% (24/7 service) by implementing Oban, a job processing library in Elixir. This ensured high reliability, consistency, and observability, improving overall system performance.
- Collaborated with executives and managers to design and develop Microsoft Power BI interactive business intelligence dashboards providing real-time insights into key performance indicators (KPIs) addressing the previous lack of data visibility for strategic decision-making resulting in an 80% improvement in data-driven decision-making at the executive level.
- Improved IT service delivery for Skyline Solar employees by implementing Zoho ManageEngine ServiceDesk Plus, establishing a user-friendly email ticketing system. This addressed the previous lack of a centralized system, resulting in over 5,000 tickets closed within a year and a closing rate exceeding 99%, enabling improved observability of IT metrics.
- Spearheaded the migration from Copper CRM to HubSpot CRM in collaboration with the Director of Sales, completed within a 3-month timeframe. This transition streamlined sales management processes and enhanced marketing integration, resulting in a 15% increase in closed deals due to better reporting and management of leads for individual sales people.
- Owned the implementation of NetSuite ERP to streamline the solar project installation process. This systematized approach resulted in an 80% improvement in account manager efficiency through enhanced reporting on project statuses and improved case management capabilities.
- Engineered a real-time integration between SolarGraf and Slack, ensuring immediate notification for all customer contract signings. This streamlined communication resulted in a 25% faster sales process by enabling sales reps to expedite next steps upon contract signing.
- Championed the co-leadership of the FieldAware integration project, successfully implementing a field service software that seamlessly integrates with NetSuite for Skyline Solar. This streamlined solution empowered account managers to schedule jobs directly within NetSuite, automatically populating them for field technicians in FieldAware. This real-time integration resulted in improved scheduling and planning for field technicians, leading to reduced costs and minimized task misscheduling between account managers and technicians.

Software Engineer

Feb 2016—Feb 2020

Vivint Solar

Lehi, UT

- Developed a suite of AutoHotkey GUI automations to streamline data entry into AutoCAD solar design documents. This innovation increased design team efficiency by 20%, primarily by facilitating rapid information entry for designers using AutoCAD solar design templates.
- Co-developed an Authority Handling Jurisdiction (AHJ) database tool built with React and DynamoDB that integrated with Vivint Solar's in-house design software. This system streamlined the design process by providing real-time policy information from utilities and HOAs, resulting in an 80% reduction in design errors caused by policy violations. The tool acts as a safeguard, preventing designers from creating designs with clear policy conflicts.
- Led a remote team of proposal designers, implementing a robust quality assurance process. This involved direct communication, providing constructive feedback, and streamlining communication between designers and sales representatives (primary stakeholders). By establishing clear workflows and expectations, this facilitated a 50% reduction in design errors and ensured high-quality proposals were presented to customers.

Software Engineer

Apr 2015—Feb 2016

ION Solar

Orem, UT

- Developed a custom solar proposal calculator in C#. This user-friendly tool streamlined the proposal design process by automating system pricing and projected savings calculations based on user-provided inputs. This innovation resulted in a 5-10% efficiency gain for proposal designers, enabling them to focus on more strategic aspects of proposal creation.
- Worked closely with sales representatives on building out residential rooftop solar proposals, providing accurate production and pricing information in an aesthetically pleasing looking PDF document. Completed hundreds while working at ION Solar.

Software Projects

[helldivers_bar_bot](#)

Mar 2024—Present

- A discord bot built in Elixir for the Helldivers 2 606th community. Features tracking of Discord user activity in the 606th community server and using that activity to build up virtual currency in user wallets which can be used to purchase fellow community members virtual drinks.
- A web interface built using Phoenix LiveView provides an admin panel for community managers to create new drinks and add quotes for the bot to say.
- Working on adding a small quantized LLM and prompting it to say unique phrases that fit the Helldivers universe about the glory of Super Earth and fighting the good fight against the Terminids and Automaton.

[bet_buddies](#)

Jan 2022—Present

- A real-time Texas Hold'em poker application. Became more serious about it after December of 2023. Creates games with UUIDs as GenServers where two or more players can join and play out a game of poker.
- Automated testing of game logic built out using ExUnit providing myself and possible future contributors with the peace of mind that all poker features are working correctly.
- Currently building out and testing the hand evaluation process which will lead into wrapping things up with determining winners and distributing winnings.
- Planning to introduce a cosmetics store for different decks and tables.

[contact_center](#)

Jul 2022—Present

- A Twilio based contact center built using Elixir, Phoenix, and LiveView. Integrates the Twilio API to facilitate making phone calls, managing contacts, and sending text messages.
- Been on hiatus for a bit due to more interest in the bet_buddies and helldivers_bar_bot project, but was built due to being quite confident that I could build out a better contact center phone than most other products on the market.

Education

Information Technology Bachelor of Science

Aug 2016—May 2020

Utah Valley University

Orem, UT

- Solidly grounded in IT fundamentals through core coursework in systems administration, programming, networking, and cybersecurity. Proficient in key technologies like Linux, Windows Server, and SQL servers. ABET Accredited.
- Related courses: Principles of Leadership, Intro Sys Admin-Linux/UNIX, Advance System Admin-Linux, Fundamentals of Programming, Info Systems Tech Fundamentals, Computer Arch System Software, Computer Programming I for IS IT, Database Fundamentals, Web Application Design, Data Communication, Voice and Data Cabling Fundamentals, Web Systems Development, Info Sec Fundamentals, Computer Programming II for IS IT, Intro Sys Admin-Windows, Advance Sys Admin-Windows, Internetworks and Router Management, Info Sec Net Defense, Enterprise Network Arch Admin VM, PHP Web App Development, Database Systems and Warehousing, Systems Analysis and Design, Enterprise Info Security Mgmt, Database Administration, Sys Design Implementation, Computer Forensics, Network Servers and Operations

Skills

Technical Skills

- **Programming Languages:** C#, Python, JavaScript (Node.js), TypeScript, Elixir
- **Web Development:** HTML, CSS (Tailwind CSS), Phoenix LiveView
- **Cloud Platforms:** Microsoft Azure, Amazon Web Services (AWS), Google Cloud Platform (GCP)
- **Databases:** PostgreSQL, DynamoDB
- **Version Control:** Git
- **API Integration:** Experience with various APIs (Copper, HubSpot, GoEverBright, NetSuite, PandaDoc, SolarGraf, etc.)
- **DevOps Tools:** Jenkins
- **System Administration:** Experience setting up and managing IT infrastructure (Windows, Linux), user management (Google Workspace, SSO)
- **Networking:** Basic networking knowledge (DNS, setting up workstations)
- **AI and Neural Networks:** Running LLMs with Bumblebee and training with Axon and NX.

Soft Skills

- **Communication:** Excellent written and verbal communication skills, demonstrated through user training and documentation creation.
- **Problem-solving:** Identified and solved complex technical challenges throughout your career, as evidenced by building custom tools and automations.
- **Leadership:** Demonstrated leadership qualities by mentoring new IT hires and guiding teams through software implementations.
- **Adaptability:** Quickly learned new technologies and adapted to changing company needs.
- **Teamwork:** Successfully collaborated with various departments (Sales, HR, Accounting) on IT projects.
- **Time Management:** Effectively managed a high workload with over 2500 tickets completed at Skyline Solar.
- **Initiative:** Proactively identified areas for improvement and developed solutions (e.g., building custom solutions at Skyline Solar and Vivint Solar)