LUKE BLAUVELT

SOFTWARE ENGINEER

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ABOUT

Engineer and problem-solver with a passion for climate action, Great Lakes preservation, and renewable energy. I approach challenges with an entrepreneurial mindset, whether designing scalable systems or tackling complex projects. Driven by curiosity, I am always on the lookout for impactful solutions to the problems I care about. Outside of work, I find adventure in the outdoors, from sailing and kiteboarding to mountain biking and skiing. Currently I am learning how to golf and using my knowledge of IoT to build a fully automated indoor garden.

EXPERIENCE

Acuity Brands, Intelligent Spaces Group Remote - Chicago
2022-2025

Software Engineer II & Interim Product Manager
Atrius Wayfinder & Atrius Locator

- **AI Tooling:** Currently developing an AI-poweredCAD-to-GeoJSON converter that semantically interprets DXF architectural floorplans using Azure OpenAI transforming raw CAD geometry into simplified map-ready features in GeoJSON format.
- **Expanded Scope in Customer Engagement:** Served as a technical solutions architect during sales calls, demoing APIs to clients, including a successful first deal closure with John Deere. Partnered with customer teams to assist in SDK integration, ensuring smooth onboarding and high customer satisfaction. Conducted a two-week design sprint, collaborating with and interviewing select customers to prototype and deliver a CMS-integrated API service.
- **Project and Product Management:** Trained and onboarded engineering team from 3 to 11 engineers, managed bi-monthly demos, supported team during product management transition as interim product manager. Led daily scrum meetings, backlog refinements, drove product roadmap and scoped technical project deliveries
- **ETL Processes:** Built and managed over 40 data integrations as AWS Lambda functions, delivering real-time data to airport maps used in 500,000+ sessions per hour. Leveraged Cloudwatch metrics and querying to triage. Added Redis Cache to address latency issues.
- **Accessibility and User Interface:** Developed multi-point map routing solutions, retrofitting UI to comply with WCAG AA 2.1 standards, achieving VPAT certification. Employed Applitools for visual regression testing and Cypress for comprehensive end-to-end testing.
- **Culture Shift:** Advocated for a problem-first rather than solution-first approach, establishing regular office hours with product leadership to empower engineers in roadmap decisions. Actively challenged engineering mandates that slowed down development to ensure agile and efficient delivery.
- **Infrastructure Automation and DevOps:** Implemented Infrastructure as Code, Test-Driven Development, and CI/CD pipelines, reducing deployment frequency to 12 hours and enabling A/B testing for features. Leveraged Dora metrics to decrease change-lead time to 1.8 days.
- **API and Architecture Leadership:** Architected the Locator API backend, building an edge-to- cloud dataflow using event-driven and micro-service architectures, processing thousands of data points per minute. Assisted project delivery from design to market launch, incorporating security, Dockerization, Azure migration, and firewalls to enhance system integrity.

Acuity Brands, Digital Lighting Network
Remote - Chicago
2021

Software Engineer I
SensorView Team (Rotation)

- **Full-Stack Development:** Contributed to the development of SensorView, a desktop application for configuring and monitoring nLight and nLight AIR network luminaires and controlled devices.
- **Real-Time Device Communication:** Implemented features enabling real-time interaction with IoT devices, facilitating immediate configuration and status updates.
- **IoT and Network Topology Expertise:** Enhanced understanding of IoT systems and network architectures, focusing on the integration and management of connected lighting devices.

Acuity Brands, Digital Lighting Network
Remote - Chicago
2020

SoftwareEngineer I
Mobile Application Development Team (Rotation)

- **Rebuilt nLight Wired Interface:** Led the overhaul of the nLight Wired user interface within the CLAIRITY+ mobile app, employing component-driven development to enhance user experience and streamline navigation.
- **Cross-Platform Deployment:** Utilized C# to cross-compile the application, ensuring seamless functionality across both Android and iOS platforms.

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EXPERIENCE

A uto d esk ,
Offerto Price
Remote - Portland
2020

Intern
SAPTechnical Integration Developer

- **Proof Of Concept:** Contributed to a 12-week proof of concept, performing rigorous testing and validation to evaluate a new system architecture's scalability and reliability.
- **Testing And Validation:** Completed specialized training in Testing Automation Frameworks, enabling efficient and systematic testing across multiple environments.
- **Cloud Standards Program:** Streamlined and consolidated the Cloud Standards and Practices Program, creating a comprehensive guide for new engineers to align with Autodesk's cloud integration best practices.
- **REST API Integrations:** Tested and validated REST API integrations to ensure seamless communication between system components, enhancing interoperability across platforms.

Acuity Brands,
Intelligent Spaces Group
Oakland, California
2019

Intern
Software Engineer

- **Full-Stack Feature Development:** Built and enhanced features for Atrius BuildingInsights, a cloud-based IoT building analytics platform, utilizing Python, Django, HTML, and JavaScript to improve data insights and platform functionality.
- **Automation and Data Integration:** Developed Python scripts to automate workflows, interface with RESTful APIs, and integrate data across systems, enhancing internal efficiency.
- **Data Visualization:** Created internal dashboards with SQL and Periscope, providing key stakeholders with real-time analytics for decision-making.
- **On-Premises Integration:** Visited tech campuses to study on-premises integration strategies, gaining hands-on knowledge for deploying IoT solutions in varied infrastructure environments.

UW-Madison ,
Facilities Planning &
Management Division
Madison, Wisconsin
2018

Intern
Building Information Modeling Engineer

- **3D Modeling for MEP and Architectural Design:** Developed comprehensive Building Information Models (BIM) using Revit and 3D Point Cloud Data, accurately modeling mechanical, electrical, plumbing (MEP), and architectural components for project visualization and planning.
- **Cross-Functional Project Coordination:** Worked closely with engineers to establish project plans, conducted site visits to gather raw data, and performed benchmarking measurements to enhance model precision and project accuracy.
- **Retrofit Cost Analysis:** Scraped and analyzed data from multiple databases to compare actual versus estimated construction costs per square foot, refining cost estimation models for future building retrofit projects.

Nexant,
(Now Resource
Innovations)
Madison, Wisconsin
2017

Intern
Energy Efficiency Analyst

- **Energy Savings Software Development:** Contributed to the design and development of software tools that provided accurate energy savings estimates, enhancing Nexant's energy efficiency analysis capabilities.
- **Data Validation and Automation:** Implemented data validation logic and updated VBA code for invoicing tools, improving data accuracy and automating invoicing workflows.
- **Data Standardization:** Normalized raw building data from diverse automation systems into a unified format, facilitating smoother data integration and analysis across multiple platforms.

EDUCATION

University of Wisconsin – Madison

Bachelor of Science
Electrical Engineering Major, Computer Science Minor
Renewable Energy Systems & Power Transmission

KNOWLEDGE

- IoT
- Full-Stack Engineering
- Web Services
- Scrum
- Machine Learning
- CICD /TDD
- Microservice Architecture
- Azure Ecosystem
- Kubernetes
- Sustainability
- Event Driven Architecture
- Machine Learning