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-present

Software Engineer II
Atrius Wayfinder & Atrius Locator

- **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 served as engineering point for interfacing with customers.
- **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.
- **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 microservice 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.
- **Technical Stack:** Used Kubernetes, Azure, Typescript, Postgres, and React to drive performance and scalability. Built an authorization service to streamline user permissions, integrating Azure B2C with AWS Cognito to synchronize cross-platform identity management.

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

Software Engineer 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

**Autodesk,
Offer to Price**
Remote - Portland
2020

Intern
SAP Technical Integration Developer

- **Testing and Validation:** Contributed to a 12-week proof of concept, performing rigorous testing and validation to evaluate a new system architecture's scalability and reliability.
- **Testing Automation:** 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