Matthew Bogard

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SUMMARY

Experienced Senior Software Engineer with a proven track record of delivering comprehensive full stack software development solutions from conception to completion. I excel in designing robust system architectures and leading software projects. I love working with great teams, and am committed to continuous learning of the craft.

TECHNICAL EXPERTISE

Areas of Continued Learning

Core AI and machine learning development skills: proficiency with ML frameworks TensorFlow and PyTorch, building AI agent software applications on top of Large Language Models (LLMs), fine-tuning custom models for specific tasks, LangChain development, Python programming, MLOps, prompt engineering, studying new cybersecurity trends, and building secure software applications.

Current Tech Stack

JavaScript | React | Node.js | TypeScript | Python | PHP | Java| LLMs | SQL | Docker | GitHub | GitLab | Amazon Web Services (Certified Solutions Architect Associate)

EXPERIENCE

Ludi, Inc.   October 2023 – Present
Senior Full Stack Software Developer

- **Technology Focus:** AWS, PHP, JavaScript, Python, SQL, GitLab, Docker, System Design

- **Team Leadership**: Led deployments of major features for the company's flagship software product.

- **Product Partner**: Guided epic design reviews, serving as a key liaison between Product and Engineering teams, aligning all on project requirements and implementation details.

- **Full Stack Development**: Demonstrated proficiency across the entire technology stack, taking ownership of feature development from conception to completion, including data modeling, back-end architecture, front-end implementation, and cloud infrastructure setup.

- **Process Improvement**: Proactively identified areas for improvement in my team's development processes, increased productivity with AI tools, implemented strategies for enhanced code review thoroughness, increased test coverage, and well-documented deployment practices.

- **Fast Problem Solver**: Excelled as the go-to developer for quickly implementing updates needed to meet client feedback. Balancing ad hoc work with planned sprint work.

- **Technology Migration Lead**: Managed the migration of major updates of the business' main software product including cloud/application architecture redesigns, as well as major version upgrades of our database and programming languages.

Passport, Inc.   March 2021 – August 2023
Software Engineer

- **Technology Focus:** JavaScript, React, Node.js, TypeScript, Java, PHP, AWS, Python, SQL, Docker, System Design

- **Full Stack Development**: Owned and completed feature development work for a suite of enforcement applications in React, Node.js, Java, and PHP.

- **Innovative Development**: Designed and implemented a real-time GPS map tool utilizing JavaScript, React, Node.js, and AWS services, enhancing enforcement team operations and system scalability.

- **Architectural Leadership**: Enhanced system architecture for the business' most important API using Node.js and AWS Lambda, achieving long-term scalability and improved system performance.

- **Product Partner**: Contributed as a key player in planning meetings by identifying scope and edge-cases for features, and adding developer notes to assist engineers.

- **Deployment Management**: Led major deployments, was responsible for a significant amount of the team's sprint story

points and maintaining successful sprints.

- **Mentorship**: Guided junior and mid-level engineers, facilitating team-acclamation, solving for operational challenges due to timezone and communication style differences.

Red Ventures December 2018 – March 2021
Software Engineer
- **Technology Focus:** React, Node.js, TypeScript, Java, AWS, Python, PHP, Python, SQL, GitHub, API development

- **Full Stack Development**: Owned and completed feature development work for central revenue-driving APIs as well as internal business tools in Node.js, Java, and React.

- **Revenue Protection**: Developed a critical React and Node.js application to safeguard the business' main revenue pipeline against third-party API failure, exhibiting strategic architectural thinking.

- **Architectural Innovation**: Overhauled a Content Management System for a vast editorial collection, leveraging Node.js, Python, and MySQL for efficient content delivery, ensuring robustness and scalability.

- **Product Partnership**: Contributed in planning and retrospective meetings, adding context to features reviewed in planning, and providing ideas for how the team can improve collaboration in retrospectives.

- **Cloud Management**: Established and managed AWS cloud infrastructure, using infrastructure-as-code methods such as Terraform to support various applications (React, Node, Java, Python, and PHP).

Scientific Politics, LLC 2018 – Present
Founder & Developer
- **Technology Focus:** Large Language Model (LLM) development, JavaScript, Node.js, Python

- Created a generative AI macOS application that accelerates task completion by using multiple AI agents that autonomously iterate and refine their approach to any given task. Available at ai.mbogard.com (2024).

- Developed JavaScript web applications presenting US congressional voting records and Census data, focusing on intuitive design and user-friendly experience. Available at mbogard.com/congress (2022) and mbogard.com/census (2018).

Texas Health & Human Services January 2017 – June 2018
Project Manager, Rate Analyst
- Managed programming initiatives for Texas Medicare & Medicaid rates in a large department. Oversaw application code for annual adjustments in Medicare & Medicaid rates.

EDUCATION
Stanford Online - Machine Learning Specialization course completion (2023)
- Learned the fundamentals of machine learning and how to use these techniques to build real-world AI applications.

DeepLearning.AI - Various courses completed on the latest in AI technology (2023 - 2024)
- Completed the following courses:
    - Finetuning Large Language Models
    - LangChain for LLM Application Development
    - LangChain Chat with Your Data
    - Vector Databases: from Embeddings to Applications
    - ChatGPT Prompt Engineering for Developers
    - Building and Evaluating Advanced RAG Applications
    - How Diffusion Models Work

Amazon Web Services - Certified Solutions Architect Associate (2021)

The University of Texas at Austin - Graduated Full Stack Web Development certification program (2018)

The University of Texas at Austin - Graduated with a Bachelor's Degree in Government (2013-2016)