CHRISTOPHER MAKOUSKY

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SUMMARY

Mechanical engineer transitioning into a software development role after completing University of Minnesota Coding Boot Camp. Hands-on project experience building both the front-end and back-end of web apps using React.js, Express.js, and other frameworks. Previous engineering position integrated airport navigation aids power equipment for with the Power Services Group (PSG) at the FAA's Power Training and Support Facility (PTSF) in Oklahoma City. Focused on equipment from Kohler, provider of engine generator systems (EGS), and Eaton Power Systems, provider of uninterruptible power supply systems (UPS).

EDUCATION

Certificate, Full Stack Web Development Immersive March 2025
College of Continuing & Professional Studies, University of Minnesota, St. Paul, MN

- University of Minnesota Coding Boot Camp, specialized programming skills for web development in front end and back end coding technologies

Bachelor of Science, Mechanical Engineering:
College of Science and Engineering, South Dakota State University, Brookings, SD May 2016

- Senior Project, Designed an electro-mechanical system for athletic training (eccentric-contraction weight training)
- Designed a personal computer system, Dual-Boot High-Performance Gaming PC

RELEVANT PROJECTS

Software Developer Sept 2024 - Mar 2025
U of MN Coding Bootcamp Minneapolis, MN
Working in teams of three to four developers to plan, design and create web-based projects that resemble real-world user applications. Created a robust portfolio of projects, and acquired skills applicable to software developer certification. Assumed role of the git configuration manager for my team ensuring that each developer's changes were correctly added to our baseline design. Experienced with web development technologies, team dynamics and project planning. Used zoom and a dedicated #slack channel to facilitate team coordination with developers of diverse skill levels to deliver projects on-time.

Key Accomplishments (GitHub repository deployed web applications):

- **Weather-Report-Dashboard-CM** - Client Server system that allows a user to search a foreign open database for current weather conditions and display a 5-day weather forecast for his favorite cities.
- **BookSearch-Engine-CM** - Client Server system that allows a user logged into a web interface to search a foreign open database for books. It allows the user to save his favorite book selections and metadata to the native NoSQL database.
- **PixelOracle-CM** - Client Server system that allows a user logged into a web interface to search a foreign open database for video game applications. It allows the user to save metadata for his favorite video game applications to the native SQL database and uses AI to make suggestions to the user for other video games that may be of interest based on his previous selections.

ADDITIONAL EXPERIENCE

Mechanical Engineer - Power Operations Engineering Team 2016 – 2020
Federal Aviation Administration (FAA) (contractor) Oklahoma City, OK
Worked on-site at the Mike Monroney Aeronautical Center (MMAC) in Oklahoma City, Oklahoma. Supported the operation and maintenance of the National Airspace System (NAS), with emphasis on second-level engineering for power systems. The mission of the Center is to directly support the safe and efficient operations for the national and international aviation systems and provide competitive business solutions for its customers.

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Key Accomplishments:

- Supported the Batteries, Engine Generators, Direct Current Backup System in the NAS.
- Configured maintenance PCs SQL to download maintenance data from battery management software systems.
- Analyzed data from battery management software systems to diagnose the health of backup power systems.
- Resolved the fielded equipment issues through engineering analyses and tests.
- Provided guidance for technicians to troubleshoot and repair components of the power systems.
- Traveled to install hardware and software upgrades for the power systems in the field.

TECHNICAL SKILLS

Standards: ANSI C
Methods: Agile software development process, Object-oriented method, Structured programming method, CI/CD pipelines, Testing (unit, component, integration, end-to-end)
Tools: Microsoft Visual C++, Git, GitHub Copilot, npm, MATLAB, PTC Creo, Vitest, Cypress
Languages: C/C++, Python, HTML, CSS, JavaScript, PostgreSQL, TypeScript, terminal commands, Bash shell script
Protocols: Node.js, Prompt engineering with AI,
APIs: DOM manipulation, Browser APIs, RESTful APIs, CRUD operations
Frameworks: Express.js
OS: Windows, Unix-like systems including GNU/Linux
Applications: Single-page applications with React, Full-stack applications, Full-stack MERN applications,
Softwares/Platforms: SQL database, NoSQL database, MS Office (Outlook, Word, Excel, PowerPoint), LibreOffice

CERTIFICATIONS

Engineering Intern (EI) certificate, South Dakota Board of Technical Professions May 2016

- Passed the Fundamentals of Engineering (F.E.) Exam
- National Council of Examiners for Engineering and Surveying (NCEES)
- Engineering intern" or "engineer-in-training", a person enrolled by the board as an engineering intern

CONTINUING EDUCATION

Minnesota State Colleges and Universities System: Online Campuses Jan 2021 - May 2023

Mechanical Engineering tools (College classes - GD&T ASME Y14.5, SolidWorks CAD, Microsoft SQL server)

LANGUAGES

Japanese Language/culture – Sep 2021 - May 2023
Intermediate Level (4-semesters, Normandale Community College)

Conversational Japanese Language Jan 2024 - May 2024
Intermediate Level (Cha-Ami Japanese Cultural Center – Lauderdale MN)