

Tom Krug

Software Engineer

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 www.tomkrug.io

 github.com/thomaskrug96

Relevant Experience

Product Development Engineer @ Analog Devices

May 2020 - August 2021 // Wilmington, MA

- ▷ Lead test engineer for highest revenue-generating product in ADIs Digital Healthcare business unit. Responsible for sustaining and new development activities including design and debug of production boards, developing test code in VBA and Python, maintaining code repositories with git and tortoiseSVN, and automating visualization reports using JMP
- ▷ Led department efforts to migrate production data from on-premise servers to virtual private cloud provider. Designed database architecture from initial concept to production deployment. Significantly reduced engineering costs by automating data workflows and reports
- ▷ Developed data processing algorithms and test cases for new products utilizing Jupyter Notebooks

Software Engineer Intern @ Lockheed Martin

May – August 2019 // Ocala, FL

- ▷ Implemented a pneumatic feedback system in C++ to optimize nitrogen gas expenditure for relative humidity chambers across the F-35 production line
- ▷ Designed an IoT mesh network using ZigBee to monitor gas consumption across the Ocala facility to provide accurate cost savings of implemented design

Software Test Engineer Co-op @ Itron

May 2018 - May 2019 // Waseca, MN

- ▷ Integrated automated test equipment into new product lines by developing LabVIEW program logic, user-interfaces, and SQL database connections to track yields
- ▷ Collaborated with design and manufacturing teams to optimize test stations for operators and increase test coverage of new products

Research Assistant @ University of Minnesota

Jan - June 2017 // Minneapolis, MN

- ▷ Utilized Hodgkin-Huxley model to statistically characterize the response of mouse hippocampal neural network exposed to various concentrations of ion-blocking reagents in MATLAB
- ▷ Performed computationally-intensive workloads across large datasets via server-side shell scripts using the University of Minnesota's Supercomputing Institute network

Projects

DJ Website @ www.djpleb.com

Feb 2022 - Present

- ▷ A creative site for my DJ hobby. Includes an admin panel to edit upcoming events and new music. Frontend and backend built with CI/CD pipeline using Django, Bootstrap, and Heroku. AWS used for asset management.

Portfolio Website @ www.tomkrug.io

Jan 2022 - April 2022

- ▷ A single-page app built using React and Gatsby to showcase my background, work experiences, and personal projects

Car Dealer Reviews Website @ www.github.com/thomaskrug96/ibm-cloud-developer-capstone-project

March - April 2022 // Minneapolis, MN

- ▷ IBM Full Stack Cloud Developer Capstone Project. Deployed a cloud-native website connected to IBM Cloudant database and microservices

Skills

Programming Languages

Python, JavaScript, SQL, HTML, CSS/Sass, JMP, VBA, LabVIEW, MATLAB, Shell

Libraries & Frameworks

React, Gatsby, Node.js, Jekyll, Matplotlib, NumPy

Tools & Platforms

Git, AWS, Kubernetes, Docker, Netlify, Heroku, VS Code

Design

Photoshop, Illustrator, Premiere Pro, After Effects

Hardware

Oscilloscopes, Function Generators, Digital Multimeters, Signal analyzers, Spectrum Analyzers

Education

Minnesota State University

2016 - 2019 // Mankato, MN
Bachelor of Science in Electrical Engineering
Minor in Mathematics and Biology
Cum Laude and Self-funded

Certificates

IBM Full Stack Cloud Developer Certificate

Jan - April 2022 // Online

AWS Certified Cloud Practitioner

April 2022 // Online

Interests

CrossFit, DJing, Traveling, Running, Reading