CONTACT

blake.espeland@gmail.com
blake-espeland.github.io
515-447-1130
Cedar Rapids, IA

BLAKE ESPELAND

SOFTWARE ENGINEER

SUMMARY

3+ years of professional engineering experience in processing high-dimensional data, implementing code from existing research, and writing embedded code for safety-critical applications.

EXPERIENCE

COLLINS AEROSPACE

Software Engineer II | 11/2022-Present

- Developing safety-critical **C** code and requirements for VxWorks and LynxOS RTOS
- Working extensively with **device drivers** and the **RTOS kernel**
- Leading software prototype for multiple new programs, winning contracts for Collins
- Increased test development productivity by **>200%** with custom tooling

SPRAYER MODS

Co-Founder | 09/2020-10/2022

- Developed multi-threaded and **highly-distributed** software, using **C++** and **Cuda**, for low-power, micro supercomputer targets
- Researched and developed computer vision models in PyTorch accurate to **5cm** and fast enough to run at 40fps

JOHN DEERE

SWE Intern | 05/2021-08/2021

- Integrated site-reliability tooling and performance monitoring
- Developed web application using React and Typescript

PROJECTS

See GitHub

CEPA | Cybernetic Economic Planning Agent

Utilizes GPU hardware to accelerate **tensor processing**

ModelForge

Computer Vision model training and development tool; based on YOLOv5 architecture

EDUCATION

BS COMPUTER SCIENCE | BS MATHEMATICS

UI Robotics Club | Further studies in physics, optimization, and analysis

University of Iowa | 2019-2022

GRADUATE COURSES

Optimization | Machine Learning | Computer Security | Networking

University of Iowa | 2021-2022

SKILLS & AWARDS

Languages: C, C++, Rust, Python, Julia
Technologies: Git, PyTorch, Linux, Bash, React, AWS, CUDA, TensorRT, CMake/Make, Docker, Redis

- 3 x 'R-Star' awards for outstanding performance (Collins)
- 4 x Dean's list (University of Iowa)