Benjamin Lee Dyer

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EDUCATION & PROFESSIONAL DEVELOPMENT

Masters of Science, Computer Science (MSCS) - 100% Complete (GPA= 4.000) Pending Graduation: May 23, 2025
University of Colorado Boulder: College of Engineering and Applied Science Boulder, CO

- Earned **Graduate Certificate in Artificial Intelligence** as part of MSCS program

Google IT Automation with Python Professional Certification Completed: July, 2022
Coursera Specialization offered by Google Online

Bachelors of Science, Mechanical Engineering (BSME) Graduation: May, 2021
Colorado State University: College of Mechanical Engineering Fort Collins, CO

ENGINEERING AND TECHNICAL SKILLS

Applicable Software Skills: Test Automation, Robotics, Computer Visio
Languages/Frameworks: Python, C, Ruby, MATLAB, SQL, C#, HTML, CSS, JavaScript, Java, R
Preferred IDE's: VS Code, STM32CubeIDE, Vim, IntelliJ IDEA **Preferred LLM's:** GPT, Windsurf
Operating Systems: Linux, Windows **Revision Control**: Git, GitHub, Gitea, SVN
Embedded Systems: Raspberry Pi, STM32, Raspberry Pi Pico, Arduino Leo, ArduinoMicro

RELEVANT WORK EXPERIENCE:

Test Engineer II, Agile RF Systems, LLC Berthoud, CO - Aug. 2023 - Present

- Wrote an extensive Python-based testing automation environment, controlling devices, data processing, and reporting
- Designed and implemented CI/CD pipelines to automate testing, deployment and production workflows
- Led the end-to-end design and testing of a production software package for controlling Phased Array devices (Python, C)
- Extensively worked with Linux environments, developing and deploying radar software on embedded Linux systems.
- Designed and validated firmware for STM32 microcontrollers in C, optimizing performance for embedded systems
- Engineered custom communication protocol for Phased Array Radar devices, optimizing transmission and reliability.
- Developed an internal asset-tracking web app using Python, improving data and documentation management.
- Automated complex calibration procedures for Phased Array Radar devices, integrating a robot arm positioner for precision
- Designed electrical interfaces and created wiring diagrams/harness drawings for deliverable hardware
- Developed an extensive suite of test automation to streamline testing and validation for RF and embedded systems.
- Managed company-wide Git repositories, improving software collaboration across teams.
- Wrote and optimized firmware for multiple embedded systems, including phased array radar devices and test GSE.

Test Engineer I, Blue Canyon Technologies Lafayette, CO - Nov. 2022 - Aug 2023

- Automated production and administrative tasks using Ruby, Python, and VBA to improve lab efficiency
- Developed utilities in Python and Ruby to automate routine oscilloscope captures and generate HTML reports.
- Used Ball Aerospace's COSMOS (Ruby) to create, modify, and debug automated test scripts for electrical hardware
- Performed functional testing on flight and GSE electrical hardware, ensuring compliance with specifications.
- Created software-driven automation concepts and presented scope-of-work, POCs, and cost estimates to leadership.

Mechanical / Test Engineer (Contract), Microsoft Fort Collins, CO - June 2021 - Nov. 2022

- Developed machine-vision algorithms to automate object detection and camera targeting using motors.
- Automated sensor testing and data processing with Python, MATLAB, and Powershell, improving testing efficiency.
- Designed software applications for communication with testing equipment via NET, I2C, and serial connections.
- Built simple electrical systems to drive stepper motors, LEDs, microcontrollers, and read thermocouples.
- Designed and 3D-printed camera testing equipment to meet project specifications.

OTHER EARLY WORK EXPERIENCE:

Project Manager, Mechanical Engineer, CSU Sr. Design Project, Woodward Inc. Fort Collins, CO, Fall 2020 - Spring 2021
Mechanical Engineering Intern, II-VI Incorporated Optical Systems Longmont, CO Summer 2019
Mechanical Engineering Intern, Redstone Aerospace Corporation Longmont, CO Spring-Summer 2016, Summer 2017