David M. Lawrence

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1 Aberdeen Way, Cambridge, Massachusetts

Experience

Roboticist, The AI Institute   *September 2024 to present*

    Motion control engineer for cutting-edge manipulators.

Electrical and firmware engineer, Markforged   *February 2016 to September 2024*

    Architected and implemented full-stack embedded control systems for Markforged 3D printers.

Electrical engineer, Formlabs   *January 2014 to January 2015*

    Designed and implemented PCBs and firmware for high-bandwidth galvanometer control.

Software intern, Google   *May to August 2011, June to August 2012*

    Implemented large-scale text indexing algorithms and distributed caching algorithms.

Consultant, Brookhaven National Laboratory   *June 2008 to August 2010*

    Developed novel techniques to characterize image sensors for the Vera Rubin Observatory.

Skills

Mathematics: linear algebra, Fourier analysis, multivariable calculus, signal processing, modern and classical feedback control, kinematics

Electrical engineering: mixed-signal circuits, power electronics, PCB layout (Altium), electromagnetic compatibility, laboratory diagnostic and test equipment, mechatronics

Computer science: algorithms, operating systems, embedded systems (ARM Cortex-M), C/Rust/Python programming languages, version control (Git)

Scientific computing: GNU/Linux environment and tools, NumPy and SciPy libraries, Matplotlib data visualization

Hobbies: airplane flying, mountaineering, jazz piano

Education

Massachusetts Institute of Technology   *September 2014 to January 2016*

    Master of engineering in electrical engineering and computer science, working in the MIT Research Laboratory of Electronics under the direction of Professor Steven Leeb.

Massachusetts Institute of Technology   *September 2010 to June 2014*

    Bachelor of science in electrical engineering and computer science and in mathematics, with a cumulative GPA of 5.0 out of 5.0.