

Ansel Horn

Software Engineer & Computer Scientist
dev@cahorn.net | (802) 380-8810 | www.cahorn.net

SKILLS

FIELDS

Artificial Intelligence
Programming Language Theory
Compiler Design
Computer & Systems Engineering

LANGUAGES

C/C++ • Python • Java • Haskell
Shell (sh, bash, PowerShell) • \LaTeX
Web (HTML, CSS, Javascript, SQL)

ENVIRONMENTS

Linux (embedded, workstation, server)
KVM • VirtualBox • Vagrant
Kubernetes • Docker • Podman

DEVOPS

Git • GitHub/GitLab CI/CD • Ansible

DIST. COMPUTING

REST • XML-RPC • MQTT • NFS

HW/SW INTEGRATION

Mastered:
Ethernet • USB • RS-232 • UEFI • IPMI
Familiar:
ACPI • I²C • SPI • CAN • JTAG

APPLIED MATH

Signal Processing • Formal Verification
Stochastic Processes • Machine Learning
Computer Graphics/Vision

LINKS

github.com/cahorn
[linkedin.com/in/cahorn](https://www.linkedin.com/in/cahorn)

EDUCATION

UNIVERSITY OF WATERLOO

MASTER OF ENGINEERING

2017 - 2019 | Waterloo, ON
Dept.: Electrical & Computer Eng.
Specialization: Software Eng.

MIDDLEBURY COLLEGE

BACHELOR OF ARTS

2009 - 2013 | Middlebury, VT
Major: Computer Science
Minors: Mathematics & Music
Magna Cum Laude

EXPERIENCE

GLOBALFOUNDRIES | MMWAVE TEST DEVELOPMENT ENGINEER

2024 - Present | Essex Junction, VT

- Designed and implemented end-of-line verification tests for Extremely High Frequency (EHF) radio transmitter microchips
- Developed advanced compiler-based techniques for generating test suites

FREELANCE | SOFTWARE ENGINEERING CONSULTANT

2023 - 2024 | Remote

- Assisted clients in implementing and maintaining enterprise software solutions
- Built and integrated custom software development pipelines into existing IT infrastructure

ONLOGIC | LEAD SOFTWARE ENGINEER

2019 - 2022 | Burlington, VT

- Architected, built, and maintained the company's custom manufacturing automation service
- Analyzed business, functional, and client requirements to understand manufacturing needs
- Autonomously configured, validated, and logged the construction of every manufactured system
- Supported global operations in the US, the Netherlands, Taiwan, and Malaysia
- Contributed custom client-requested manufacturing automation that led to \$10M+ in sales

MIDDLEBURY COLLEGE | ASSISTANT IN SCIENCE INSTRUCTION

2013 - 2016 | Middlebury, VT

- Taught lab sections for introductory & intermediate computer science courses
- Cooperatively managed the department's computer laboratories and server infrastructure
- Oversaw 40+ student tutor and grader employees

RESEARCH

MIDDLEBURY COLLEGE

Summer 2013 | Middlebury, VT

- Built a machine learning framework to analyze the vocabulary of Wikipedia
- Published original research in the proceedings of the Association for Computational Linguistics [1]

NATIONAL ROBOTICS ENGINEERING CENTER

Summer 2012 | Pittsburgh, PA

- Contributed to the construction of an autonomous driving system in cooperation with the United States Marine Corps and Oshkosh Defense
- Improved the accuracy of the system's LiDAR scanner using ML

PUBLICATIONS

- [1] C. Horn, C. Manduca, and D. Kauchak. Learning a lexical simplifier using wikipedia. In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, pages 458–463, 2014.