

# Decker Bjorn Krogh

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## PROFILE

Engineering student interested in technology, science, math, music, and athletics.

## Education

- Currently pursuing a Master's in Natural Language Processing at UCSC
- Cognitive Science major, Computer Science minor, graduated from UCSC in June, 2023

## Engineering Skills

- Languages: C, C++, Python, C#, R, MATLAB
- Libraries: Tensorflow, PyTorch, NumPy, Pandas, Scikit-learn
- Tools: Git, SVN, Mercurial, linux, terminal, vim
- Embedded: PCB design, SBC development, I2C, SPI, Altium Circuitstudio, AutoCAD
- Project management

## UCSC Cognitive Modeling Laboratory – Undergraduate Researcher, Jan–June 2023

- Rewriting EPIC, a cognitive modeling architecture, from C++ to Python

## UCSC Bike Co-op – Volunteer, 2021–2023

- Worked one-on-one with members of the public to assist in their bike issues
- Performed repairs and maintenance on customers' bicycles
- Retail sales

## Autometrix Precision Cutting Solutions – Electrical and Software Engineering Intern Summers and Winters 2016–2023

- Designed and coded routines in C++ for a new motion controller for all new Autometrix machines
- Updated C# desktop software codebase to accommodate new controllers
- Designed and engineered C++ motion controller routines for the company's lexan driller. This architecture served as a proof of concept for the next generation of production motion controllers.
- PCB QA Engineering 2020–2022
  - Designed an 8-layer, pre-production PCB in Altium CircuitStudio which tests end-user PCBs before production delivery
  - Created a motion controller simulator in Python that tests IC components via I2C over a large codebase
- Programmed an SBC using Arduino C/C++, shift registers, oscilloscopes, etc., to test for faulty cables
- Other duties included building hardware to accommodate cable tester, researching and recommending pick-and-place robots, authoring machine documentation, building an SBC micro-controller, and researching G-code motion controllers for future implementation
- Also employed as **Tech Assembler 1** in 2019 building cable assemblies for CNC cutting machines

### **Artificial Intelligence (CSE140) – Tutor, Fall 2022**

- Provided hands-on instruction to students enrolled in CSE140 - Artificial Intelligence

### **Independent Landscaping Contractor, Jul-Sep 2019**

- Job estimation, pricing, negotiation
- Services include firewood felling/bucking/splitting, blackberry abatement, and wildfire clearing
- Maintained all 2 stroke machinery

### **Other**

- Avid athlete competing in Track, Cross Country, and Cycling
- Proficient singer and guitarist who regularly performs live
- Member of UCSC Classical Guitar Ensemble 2022-2023
- Designed and built several guitar effects pedals as well as a JCM800 amplifier