Chetan **Sharma**

FULL-TIME CANDIDATE

(+1) 858-829-5598 | schetan098@gmail.com | www.cactode.club | cactode | cactode

Summary

Software engineer with experience in Python (data analysis, backend, ML), C++ (embedded programming, Halide), and more. MIT Masters graduate with work experience at NVIDIA, Amazon, & Anduril Industries. Proven track record of both defining and developing projects on tight deadlines. Passionate about DIY and fun personal projects - ask me about my building-sized robotic whipped cream dispenser.

Work Experience

Anduril Industries
Irvine, CA

R&D ENGINEER — *May 2020 - Present*

- Leading the redesign of a high-reliability pan-tilt sensorhead intended for AI-driven object detection.
- Managing the mechanical, firmware, and software aspects of the project

Center for Bits and Atoms @ MIT
Cambridge, MA

ROBOTICS RESEARCHER — *August 2019 - July 2020*

- Applied online machine-learning techniques to CNC manufacturing by using fused sensor data to estimate process parameters in real time & optimize input parameters in response.
- Designed a modular software architecture capable of managing multiple sensors and a physical CNC machine in a safe manner.

NVIDIA Corporation
Santa Clara, CA

SOFTWARE / DATA ENGINEERING INTERN — *May 2018 - August 2018*

- Created an internal web app that allowed engineers to aggregate and visualize RF test data in an intuitive manner.
- Created a backend using Flask and MongoDB capable of filtering and pre-processing large amounts of data with a RESTful API
- Designed a frontend using C3.js and Bootstrap that allowed users to build data queries and convert them into dynamic graphs.
- Managed all aspects of project management while coordinating the needs of multiple users.

Distributed Robotics Lab @ MIT
Cambridge, MA

ROBOTICS RESEARCHER — *September 2017 - January 2019*

- Designed and built a novel autonomous robot capable of cutting arbitrary 2D shapes using a commercial jigsaw
- Created a software subsystem in Python to safely control the robot over a wireless link

Amazon Robotics
Seattle, WA

DATA ENGINEERING INTERN — *May 2017 – August 2017*

- Automated the analysis of cycle time data scraped from existing internal web pages using Python and Pandas.
- Ran statistical tests on large quantities of data to inform purchasing decisions and achieve estimated savings of $100,000.

Education

Massachusetts Institute of Technology
Cambridge, MA

MASTERS & B.S. IN COMPUTER SCIENCE AND ENGINEERING — *May 2015 - July 2020*

- Relevant coursework: Computer Vision, Computational Photography, Machine Learning, Vehicle Autonomy, Algorithms, & Control Systems
- Member of TechX, a student organization that organizes hackathons and advocates for STEM careers.

Personal Projects

RESONANT 'SONIC SCREWDRIVER' — *May 2021*

Created an STM32-powered device that uses a surface transducer coupled with an accelerometer to find the resonant frequency of an object and shake it violently. Firmware made extensive use of advanced peripheral features and ARM DSP instructions.

DORM KITCHEN CLEANLINESS WEB APP — *August 2018*

Created a Flask web application wth OAuth authentication that allowed dormitory residents to monitor kitchen cleanliness and identify individuals that leave behind dishes.

Awards

2019 **Finalist,** BattleBots Season 4 — *Long Beach, CA*

2018 **First Place,** QVC Prize @ HackMIT Hackathon — *Cambridge, MA*