# John Smith

## About


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marco-acea

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## Programming Languages

Python
Golang
C
Typescript
HTML/JS/CSS

## Software/Frameworks

Selenium
Django
Kubernetes
Google Firestore
Argo CD

## Education

### Carnegie Mellon University

*08/2018 - 12/2022*

Bachelor of Science in Electrical and Computer Engineering

- Structure and Design of Digital Systems
- Signals and Systems
- Web App Development
- Intro to Computer Systems
- Intro to Embedded Systems
- Fundamentals of Embedded Control
- Logic Design and Verification

## Experience

### Intuit

*05/2021 - 08/2022*

Software Engineering Intern (Two Summers)

- Developed a new feature project, the ArgoCD AppSource Controller, for the Argo Kubernetes Organization
- Developed a static and dynamic query rate limiter for GraphQL services

### 23andMe

*07/2020 - 09/2020*

Software Engineering Intern

- Developed user interface using Flask API endpoints to display information about hosted applications (statuses, owners, authentication tokens, etc.)

## Projects

### PD Temperature and FSM Rollercoaster Controller

*01/2022 - 05/2022*

Fundamentals of Embedded Control

- Developed a Proportional-Derivative controller that approaches and holds a desired temperature within a closed chamber
- Developed a finite state machine controller that manages model rollercoaster carts through the track
- Designed electrical circuit and built testbenches for both controllers

### ArgoCD AppSource Controller

*05/2021 - 08/2021*

- Kubernetes Custom Resource Definitions that gives under-privelaged users permission from admins to create ArgoCD applications automatically
- Supports multiple ArgoCD Project "profiles" that limit what actions sub-users can make with their application.
- Currently going through adoption proccess for the argo-proj-labs collection of vetted community projects

### UART/I2C Controller and Real Time Kernel

*01/2021 - 05/2021*

Intro to Embedded Systems

- Used Memory Mapped I/O (MMIO) to build UART and I2C peripheral drivers
- Built an acoustic "clap" detector that runs on the STM32 Nucleo Board using I2C for acoustic data and UART to print sensor data to the console
- Designed multi-threaded Real Time Operating System (RTOS) with context switching, mutexes, and enforced fixed priority scheduling.

### Malloc and Unix Tiny Shell

*08/2020 - 12/2020*

Intro to Computer Systems

- Implemented dynamic memory allocation library in C using both explicit and segregated free lists
- Developed a Unix shell program that supports job control using process control and signalling.