https://racecraftr.github.io

## Important Links

GitHub: https://github.com/racecraftr
Blogs: https://medium.com/@savim2020 and https://medium.com/hackerlog
YouTube: https://www.youtube.com/channel/UCbfng4kyQt2QEzXktgCECDw
Personal Website: https://xinf.dev/

## Work Experience

**Smart Beej (Summer 2023 internship)**: Helped to set up microcomputers to manage modular, hydroponics-based farms in India in order to combat the effect of climate change and produce food more sustainably. Tasks involved:

- Discussing and designing remote sensor management frameworks with the core engineering team
- Migrating the on-farm software from a proprietary OS to Amazon Web Services' Greengrass to manage programs remotely
- Calibrating on-site sensors at farms in India, and developing algorithms to process raw sensor input into actual readings for temperature, humidity, etc.
- Data collection on-device and extraction to cloud-based data warehouse
- Work continued over summer and into the fall of 2023 to get the devices production ready

**Gradzilla (Summer 2024 personal project)**: Created a web application that used generative AI and real-world college data to aid others in the college selection process.

- https://gradzilla.app
- Video demo: https://youtu.be/BgpLiC7i-I8
    - More natural search using generative AI (Google Gemini)
    - Contains course catalogs
    - Can keep context within a chat session
- Backend written in Spring Boot & Flask
    - Deployed on Cloud Run
    - Using Cloud Datastore for storage of colleges and courses
    - Using Cloud Firestore for storage of users, chats, bookmarks, and data vectors
- Frontend written in Flutter/Dart
    - Using Cloud Storage to store web files
    - Using Google Authentication to manage log-ins

**XINF (Fall 2022-present)**:  a suite of micro utilities that perform common, boilerplate tasks for developers through a simple REST API.

- https://xinf.dev/
- A REST api to help app writers conveniently get common pieces of information.

- Written in Go, deployed on Cloud run, using BigQuery for analytics.
- Some of these functions are being used by other developers around the world.

## Education

- College Freshman at the University of Maryland - College park
    - Majoring in Computer Science with a focus in Machine Learning
    - Part of UMD's Tactus Choir

- High School Graduate (Rutgers Preparatory School, Somerset, NJ, USA)
- GPA: 4.22 (weighted)
    - Relevant courses: AP Computer Science, Advanced Software Design, AP Calculus AB, AP Physics, AP Environmental Science
- ACSL (American Computer Science League)
    - Finalist for 4 years in a row
    - 2019: Team won first place in New Jersey in the Junior Division, 7th in world competition
- MEGA Hackathon 2022
    - Won best high school project
    - Official website: https://megahack.tech/

## Skills

Java/Spring Boot, Go, Dart/Flutter, Python, Kotlin, Javascript, Google Cloud Platform, LaTeX, VsCode, IntelliJ, GitHub, Xcode, Swift/SwiftUI, Google Docs, Processing(.pde), Neural Networks, Generative AI

- Latex example: https://github.com/racecraftr/racecraftr.github.io/blob/main/latex_example.pdf

## Relevant Projects

**Gradzilla (In beta)**

- https://gradzilla.app
- Created a web application that used generative AI and real-world college data to aid others in the college selection process.
- Video demo: https://youtu.be/BgpLiC7i-I8
    - More natural search using generative AI (Google Gemini)
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- Frontend written in Flutter/Dart
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**Teaching Python Course to Middle Schoolers**

- Collaborated with two other classmates to create a Python programming course. The course contained slides and sample code to teach middle schoolers a 10-day course for Python.
- Link to slides: https://drive.google.com/drive/folders/1pwI8gpP6Cn3MLrQ_ND-bh_e4uEnYPyV0?usp=sharing

**Image edge detection**

- Wrote a program that detects edges in images using the Processing Language. This was done by applying a basic matrix transformation on the underlying image.
- Link to blog post: https://medium.com/hackerlog/edge-detection-4d42ca234dfb

**XINF**

- https://xinf.dev/: a suite of micro utilities that perform common, boilerplate tasks for developers.
- A REST api to help app writers conveniently get common pieces of information.
- Written in Go, deployed on Cloud run, using BigQuery for analytics.
- Some of these functions are being used by other developers around the world.

**“Useless” Java**

- Consistently uploaded interesting pieces of code written in Java & Kotlin over the course of the Summer of 2022. Supplemented code with blog posts and Youtube videos explaining and demonstrating the overall structure and functionality of each day.
- Link to GitHub https://github.com/racecraftr/UselessJava
- Blog series on https://medium.com/@savim2020
- Focused on:
    - Messing with Libraries
    - String manipulation
    - Esoteric Programming Language Program Generation
    - Making the code as useless as possible

**Untitled App (In progress)**

- Location-based social media app that has the following functionality
    - Asynchronous access to location data

    - Posting and retrieval of social media posts
    - Liking and like counting
    - Reporting with removal of content after certain number of reports
- Backend written in Spring Boot
    - Deployed on Cloud Run
    - Using Cloud Datastore for storage of messages
    - Using BigQuery for analytics
    - Using Cloud Storage for image and large object storage
- Frontend written in Flutter/Dart

**Stay Safe (In progress)**

- App that allows administrators of commercial/educational facilities to quickly send alerts to others
    - Alerts can refer to any sort of emergency, such as medical, criminal, etc.
- Backend written in Spring boot
- Frontend written in Flutter/Dart

**Interactive Series**

- Interactive, visual programs
- Exploring use of Computer Science as Art
- Written in the Processing Language
- Series on https://medium.com/hackerlog

## For fun

**In general**

- Juggling
- Proficiency in written and spoken french

**High school**

- Cross Country running
- Member of school choirs
- Cast member in school-run musicals for three years in a row
- Participant in School Cultural Shows
- Coding in my fun time
- Ran the Chess Club at school