Copeland Carter
Software Engineer | Backend Developer

📞 (208) 513-0110 | ✉ smartycope@gmail.com | ⌗ github.com/smartycope | ⓑ smartycope.org

Skills

- **Languages**| Python, TypeScript, R, HTML/CSS, SQL
- **CI/CD** | Git, Bash Scripting, Jira, Docker

- **Backend** | Django, Databases, Linux, REST APIs
- **Frontend**| React/JSX, UI/UX, GitHub Pages

Education

Brigham Young University - Idaho   *Student | April 2019 - July 2024*
*Graduated with a Bachelor's in **Computer Engineering** and a **Machine Learning** Certificate*

Experience

EZRegex   *Published Python Package and Web Frontend*
- Developed *EZRegex* from scratch, a **Python** library that greatly simplifies Regular Expression syntax
- Has a web frontend on ezregex.org, which includes a suite of tools to aid in developing **Regular Expressions**
- Has a fully open-sourced Python package published on PyPi.org

Senior Project   *Custom Machine Learning Environment and Algorithms*
- Designed a custom gym environment from scratch to attempt to solve the Square Packing problem
- Wrote 2 custom **algorithms**, using ML and simulated annealing to attempt to find a better configuration than the best-known configuration for N=11 squares

GeoDoodle   *Custom Drawing Program*
- Developed and maintains a **web app** allowing users to create unique patterns on a graph paper-like interface
- Designed an intuitive **frontend** with features like drawing, repeating, and seamless pattern export

AntAI   *Custom Machine Learning Environment and Algorithms*
- Designed and built a simulated game environment from scratch in Python to use **TensorFlow** to create a deep reinforcement learning model to complete it
- Designed and built a custom evolutionary algorithm from scratch to use simulated annealing to solve it

Building Predictions   *Team Data Science & Machine Learning Project*
- Led a team project to aggregate **large datasets and APIs**, utilizing machine learning to predict outcomes, demonstrating the ability to deliver significant results within a specified deadline

Client Work   *Custom Report and Graphs for Client*
- Wrangled data from multiple sources, including the US Census and the ACS, using R, Python, and Streamlit to create a **custom report** for a paying client

Work Experience

Acer   *Certified Repair Technician | December 2024 - Present*
- Works fixing iRobot Roombas, diagnosing problems, debugging firmware, and writing detailed reports
- Wrote **custom software** to streamline my daily workflow, increasing efficiency by more than 20%
- Communicate effectively to clients, while efficiently managing data between several internal platforms

Accendero Software   *Software Engineering Intern | February 2024 - July 2024*
- Worked as part of a team of engineers to develop both the frontend and backend of a research-oriented pharmaceutical software suite for clients
- Developed a complex Python **Django** API framework and successfully tested it to meet client requirements
- Developed and tested a large **React** TypeScript web application using **CI/CD** to maintain client satisfaction