

# Adhvik Kanagala

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## Education

### Carnegie Mellon University

*Bachelor of Science*  
May 2024

Intended transfer to Computer Science in Spring 2022

GPA: 3.92

Dean's List, High Honors

*Research Areas:*

Language Production through Typing

*Additional Minors:*

Cognitive Neuroscience

*Relevant Coursework:*

- [15-213](#) Introduction to Computer Systems
- [15-150](#) Principles of Functional Programming
- [15-122](#) Principles of Imperative Computation
- 21-127 Concepts of Mathematics
- [15-112](#) Fundamentals of Programming and Computer Science

## Activities

### [ScottyLabs](#)

Tech Project Lead, ScottyMaps

### Nozari Lab

Undergraduate Research Assistant

## Skills

*Languages:*

Python • C • Standard ML • OCaml • Javascript • Typescript • Dart • x86-64 • R • MATLAB

*Technologies:*

Git • MongoDB • React • Flutter • APIs

*Other Skills:*

Teaching • Review

## Work Experience

[15-112](#) Programming and Computer Science • Teaching Assistant Feb 2021 - Present

- Collaborate with professors to lead the review team, which provides actionable feedback and approves class notes, assessments, assignments, and all other student-facing material before public release
- Develop practice materials, teach group sessions of 5-100 students, tutor struggling students, grade assignments and assessments, hold office hours for 2+ hours per week
- Mentor 10 students each semester through a 1000-1500 line term project showcasing algorithmic complexity and visual design

[Nozari Lab](#), Carnegie Mellon University • Research Assistant Feb 2021 - July 2021

- Worked with the [jsPsych](#) library to build and deploy a web-based linguistics experiment to investigate language production pipelines through the task of typing words
- Built a processing tool in Python to categorize linguistic errors in typed input

[Taylor Lab](#), Princeton University • Research Assistant June 2019 - August 2019

- Used virtual reality simulations to evaluate the effects of 3D cues on depth perception
- Wrote custom scripts using R to conduct statistical analysis on over 12,000 trials

## Projects

[ScottyMaps](#) (Working Title) • 2021-2022

- Building an interactive navigation mobile application for the Carnegie Mellon community
- Use Dijkstra's algorithm to provide indoor navigation through campus facilities
- Expected completion: spring of 2022

[Sports Manager](#) for National Sports Council of Sri Lanka • Summer 2021

- Used the [MERN](#) stack to digitize player management for Sri Lankan national athletics
- Built a desktop website in React for sports associations and national sports council to track and approve activities, payments, and competitive standings
- Deployed a mobile app with Flutter for players and coaches to record activities and track payments

[Tartanhacks Dashboard](#) • 2020-2021

- Used Flutter to build a hackathon-focused dashboard app for iOS, Android, and the web
- Implemented leaderboards, check-in system, project submission, team search, event calendar, and an account system
- Used for TartanHacks 2021, an international hackathon at CMU with 350+ participants
- Deployed a backend API with MongoDB and Express.js to manage hacker and event data

[Primrunner](#) • Fall 2020

- Implemented a rogue-like mazerunner game by utilizing Prim's algorithm to generate successively larger mazes filled with weapons, powerups, and enemy AI
- Built in Python, using Tkinter and a graphics package built at Carnegie Mellon

## Research and Publications

[Protein Analysis](#) of selected genes of *Landoltia punctata*

*Author*, Multiple sequences published on NCBI's GenBank (2020)

[A Tale of Twisted Tentacles](#)

*Co-Author*, Case study on calamari food impaction with gastrointestinal bleeding (2018)