

# Sotiris Karagounis

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## TEACHING & LEADERSHIP

### Teaching Assistant, Brown University

2017 - Present

**TA for CSCI 0160:** Introduction to Algorithms and Data Structures (Approx. 250 students)

**TA for CSCI 0150:** Introduction to Object-Oriented Programming (Approx. 400 students)

#### Responsibilities include:

- Grading students' projects and assignments
- Held regular TA hours
- Holding weekly labs and section
- Improving upon lectures and class materials

### Leadership Role, Students for the Exploration and Development of Space (SEDS) Brown Chapter

2017 - Present

Student organization for space enthusiasts. (Approx. 60 members)

#### Responsibilities include:

- Organizing events and club excursions pertaining to space
- Maintenance of the student website
- Promoting the chapter around campus

## EXTRA-CIRICULAR PROJECTS

**Yale Hackathon (YHack):** Created with a team a Google Chrome extension called **FakeOut** that detects whether the article that is about to be posted by a user on Facebook is fake news. *Acknowledged* for a prize in the Fake News category. **Used libraries:** scikit-learn, Flask, Beautiful Soup

**CS 0160 Machine Learning Project:** Designed a homework project to introduce students unfamiliar with CS to machine learning. Students write an ID3 algorithm to create a decision tree using support code provided. **Used libraries:** JavaFX

## COMPUTER SCIENCE ESSAYS

**IB Extended Essay:** Under what condition is it possible to completely match two sets using simple bipartite graphs? Essay on graph theory, (Grade A)

## INTERESTS

I am interested in astronomy, astrophysics and data science application to these fields. Other interests include: cooking, LGBT events and science fiction novels.

## EDUCATION

### Brown University, Providence, Rhode Island

2016 - Present

Bachelor of Science Candidate, Major in Computer Science  
Expected Graduation Year: 2020, GPA: 3.4

## SELECT COURSEWORK

**CSCI 0150:** Introduction to Object-Oriented Programming and Computer Science

**CSCI 0160:** Introduction to Algorithms and Data Structures

**CSCI 0220:** Introduction to Discrete Structures and Probability

**CSCI 0330:** Introduction to Computer Systems

**MATH 0180:** Intermediate Calculus

## CURRENT COURSEWORK

**MATH 0520:** Linear Algebra

**APMA 1650:** Statistical Inference I

**CSCI 1950Y:** Logic for Systems

**CSCI 0160:** TA Apprenticeship

## SELECT COURSEWORK PROJECTS

**Shell:** Created a fully-functional shell in C with job-handling, built in command and program execution.

**Malloc:** Implemented malloc, realloc and free in C. The dynamic memory allocator uses splitting, coalescing and a free list to keep the heap consistent.

**Pacman:** Fully functional Pacman that uses BFS as simple game AI for the ghosts.

**Seamcarve:** Using a dynamic programming algorithm, created software that removes non-important pixels with the goal of resizing the image itself.

## SKILLS

**Proficient programming in:** Java and Python

**Familiar with:** C.

**Experience with the following libraries:** scikit-learn, Flask and comfortable with the UNIX/LINUX environment.

## LANGUAGES

Greek (Fluent)

Spanish (Beginner)