Talley Amir

Contact Information

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Research Interests

Population Protocols

Secure Distributed & Cloud Computing

Education

Yale University

(Aug 2018 - Present)
PhD in Computer Science

Cumulative GPA: **4.00**

Brown University

(Sep 2014 – May 2018)
BS in Applied Mathematics & Computer Science

Cumulative GPA: **3.89**

More Information

https://github.com/TalleyAmir

https://linkedin.com/in/TalleyAmir

Research Experience

Yale University (Aug 2018 - Present)
PhD-Seeking Student

Studying theory of distributed systems with a focus on population protocols.
Advisor: James Aspnes

Brown University (Sep 2017 – Jan 2018)
Undergraduate Research Assistant

Assisted in developing a secure cloud computing model that aims to minimize the amount of data leaked to a server that hosts information about a graph.
Advisors: Roberto Tamassia and Esha Ghosh

Teaching & Work Experience

Tsai Center for Innovative Thinking at Yale (June 2019 - Present)
Full Stack Developer

Designed, developed, and documented components of an open-source blockchain-based project to support climate accounting.

EduExplora (July 2019)
Lead Instructor

Designed and taught two course curricula (one in discrete mathematics, the other in cryptography) to high school students.

Brown University (Oct 2016 – May 2018)
Head Teaching Assistant for CS22: Discrete Structures

In addition to undergraduate teaching assistant duties (see below), duties, I also helped hire and train a team of UTAs, collaborated with the professor to design the course, and managed a staff of 30 TAs.

Ernst & Young (Jun 2017 – Aug 2017)
Cyber Security Risk Consultant

Developed cyber risk assessment tools, attended meetings and workshops for the purpose of strengthening clients' security systems, and drafted reports detailing current news in cyber security as well as metrics and benchmarks for tracking progress in cyber-development projects.

CrowdTangle (Jun 2016 – Aug 2016)
Digital Marketing Intern

Researched social media accounts on various platforms for clients of a rapidly growing tech startup company (procured by Facebook in 2016).

Brown University (Jan 2016 – May 2016)
Undergraduate Teaching Assistant for CS22: Discrete Structures

Drafted homework problems, solutions, and grading rubrics, graded weekly problem sets, and held weekly office hours for helping students with assignments and course materials.

Languages

Spoken

First language is English, conversational in Hebrew and Spanish

Programming

Python, Java, MatLab, Go, LaTeX, C, JavaScript, Scala, HTML

Talley Amir

Honors & Awards

Awarded the *Senior Prize in Computer Science* for academic excellence and outstanding service to Brown's computer science department

Admitted to compete in Citadel & Citadel Securities Summer Invitational Datathon 2019 in San Francisco

You Might Also Like to Know

I can solve a 3x3 Rubik's cube in less than one minute

I designed this resume myself in LaTeX

I bake the best chocolate chip cookies

Projects

Blockchain Literature Review
Short Paper

Wrote a short survey paper that reviews various blockchain ecosystem designs and created a GitHub repository with summaries of the papers referenced in the survey.

Broadcast Encryption Based on the Naor-Reingold PRF
Short Paper

Wrote a short research paper that defines a broadcast encryption scheme and proves its security by reduction to the hardness of the discrete logarithm problem.

Padding Oracle Attack
Python

Used the padding oracle attack to decrypt a message encrypted using a block cipher in CBC mode.

TCP
Java

Implemented the TCP network protocol API from scratch.

Flag
Go

Given a poorly secured website, discovered vulnerabilities and designed and executed exploits to steal unauthorized information and escalate privileges (e.g. SQL injection, parameter based access control, file injection, cross-site scripting, etc.).

Dropbox
Go

Designed and developed a file hosting system which allows multiple users to register for an account and securely authenticate their credentials to upload and download their personal files.

Bitcoin
Java

Implemented a program that simulates Bitcoin transactions. Given a list of public keys of the current owners of n coins and a list of t transactions, determines whether each transaction contains a valid ECDSA signature on the Secp256k1 curve, performs the transaction if the signature is valid, and prints the final owners of the n coins in order.

NTru
Java

Wrote a program that encrypts and decrypts messages using NTru scheme given parameters.

Skills

Adobe Applications

Experienced in using Adobe Photoshop, Illustrator, InDesign, Dreamweaver, and XD for designing and prototyping websites, web applications, decks, books, business cards, and other documents.

Project Management

Enthusiastic about collaborating, adept in time management and task delegation, effective in communication of concepts and expectations, and very open and receptive to feedback.