



# ALEX BELLON

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## EXPERIENCE

**TA for CS349: Contemporary Issues in Comp. Sci. | UT Austin** **Spring 2021**

- Graded assignments and held office hours for a class of **40+** students
- Shared resources regarding ethical and social issues in computer science

**Security Engineering Intern | Mozilla** **Summer 2020**

- Worked on Dependency Observatory, a tool that allows developers to check how secure an NPM package is before using it in their project.
- Researched common security weaknesses in NPM, PyPI and Cargo packages
- Worked with Python, k8s, Docker, Flask, GraphQL

**Security Analyst Intern | Electronic Arts** **Summer 2019**

- Used Python to automate checking for attack vectors on EA's cloud instances. Scanned **800+** instances, found **1400+** security incidents

**TA for CS361: Intro to Security | UT Austin** **Jan - Dec 2019**

- Created and graded security-focused assignments and CTFs for **80+** students
- Lectured on various topics in security like cryptography and forensics

## EDUCATION

**University of California San Diego, 2021 - Current**  
PhD in Computer Science

**The University of Texas at Austin, Class of 2021**  
BS in Computer Science, BS in Mathematics, 3.69 GPA

## TECHNICAL SKILLS

Most comfortable in Python, Java and C, familiar with C++, HTML, CSS, MySQL and Haskell.

Comfortable with Linux and UNIX, Shell (bash/zsh), Git, Vim, and command line tools. Familiar with k8s and Docker.

## AWARDS

**Capture the Flag**  
1<sup>st</sup> SunshineCTF, 3<sup>rd</sup> Angstrom CTF, 3<sup>rd</sup> AtlassianCTF ('18 and '19), 10<sup>th</sup> SwampCTF

**Texas Network Massacre**  
1<sup>st</sup> at Attack/Defense CTF

**Hackathons**  
1<sup>st</sup> at TAMUHack '19, 3<sup>rd</sup> at Hacklahoma '19, top 10 at Hacklahoma '18, 14 total

**UTCS Grace Hopper Conf. Scholarship (2019)**

**WISP DEFCON Scholarship (2019)**

**USENIX Security Diversity Grant (2020)**

## SELECTED PROJECTS (more on GitHub/website)

**Anshel-Anshel-Goldfeld key exchange with Rubik's Cube Group**

- Implementation of a key exchange protocol that uses non-commutative cryptography with the Rubik's Cube Group written in Python

**Goldreich-Goldwasser-Halevi encryption scheme**

- Implementation of a lattice-based cryptosystem written in Python

**Drunken Bishop**

- Program written in Python that uses the Drunken Bishop algorithm to output the ASCII art representation of an OpenSSH public key fingerprints

**Scrambled: Rubik's Cube based steganography | published in 'PagedOut!' zine**

- One-page paper about a steganography problem I created for UTCTF

**AllerGen | 1st place at TAMUHack 2019**

- Allows you to input allergens then scan food barcodes to see if you are allergic
- Worked in Python to query USDA database for ingredients, determine if user is allergic, and find common ingredients between foods

## LEADERSHIP

**President | Information & Systems Security Society** **2018 - 2021**

- Write security challenges for Capture the Flag (CTF) competitions with **50+ participants**, as well as a yearly international CTF with **1200+ teams**
- Lead a team of **15 officers** and serve an organization with **100+ members**

**Captain | UT CCDC & CPTC Team** **2019 - 2021**

- Placed 2<sup>nd</sup> in 2019, 3<sup>rd</sup> in 2020 at Southwest Regionals (CCDC), 2<sup>nd</sup> in 2019 at New England Regionals '19 (CPTC)

**Web/Tech VP | Association for Computing Machinery** **2018 - 2020**

- Implemented new features and fixed bugs on UT's ACM chapter website
- Wrote curriculum for and hosted a series of **8-10 introductory workshops** for freshmen with topics like Linux basics, Git/VCS, debugging, etc

## OTHER ACTIVITIES

**Q++ Member** LGBTQ+ computer science club **2019 - 2021**

**Hispanic Association of Computer Scientists Member** **2017 - 2021**

**Hook 'Em Arts Member** Performing Arts appreciation club **2017 - 2021**

**Austin Quidditch Club** sports team **2017 - 2019**