# Alex Karacaoglu

STUDENT · SOFTWARE DEVELOPER GREATER BOSTON AREA

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Dedicated student and aspiring software developer looking to gain real-world experience

#### Education\_

## Boston College, Morrissey College of Arts and Sciences

Chestnut Hill, Massachusetts

BACHELOR'S DEGREE WITH MAJORS IN MATHEMATICS AND COMPUTER SCIENCE

Aug. 2015 - Exp. May. 2019

- Dean's List (Spring 2016, Fall 2016, Spring 2017, Fall 2017)
- Mathematics Major GPA: 3.55/4.0

Computer Science Major GPA: 3.80/4.0

• Coursework: Computer Organization, Computer Security, Computer Systems, Cryptography, Data Structures, Differential Equations, Differential Geometry, Dynamical Systems, Euclidean/Non-Euclidean Geometry, Logic, Probability, Real Analysis, Randomness

## Work Experience\_

## **Liberty Mutual Insurance**

Boston, Massachusetts

INCOMING SOFTWARE DEVELOPMENT INTERN

May 2018 –

# **Boston College, Department of Learning Resources for Student Athletes**

Chestnut Hill, Massachusetts

Jan. 2018 - Present

COMPUTER SCIENCE TUTOR

- Provide weekly small-group and one-on-one tutoring sessions
- Intro to Computer Science I (Python) Spring Semester 2018

### **Boston College, Computer Science Department**

Chestnut Hill, Massachusetts

UNDERGRADUATE TEACHING ASSISTANT

Aug. 2017 - Present

- · Hold weekly office hours as well as grade and provide feedback on problem set submissions
- Intro to Computer Science II (Algorithms, Data Structures, Java) Fall Semester 2017
- Randomness and Computation (Matplotlib, NumPy, Python,) Spring Semester 2018

#### **InterSystems Corporation**

Cambridge, Massachusetts

PRODUCT SUPPORT INTERN

May 2017 – Present

- · Trained in InterSystems Caché and AngularJS
- Provided functionality and security enhancements to the Hazard Log, a clinical risk application that is used with the TrakCare EMR. Some enhancements include user permission levels, application use audit, authentication, query fixes and more informative change logs
- Designed an algorithm to provide analysis on how well the company is doing in upholding its service level agreements (SLAs) with customers. Used this to embed an analytics dashboard into the TrakCare Resolution Center to provide management new insights into the data

#### Leadership\_

#### **TEDx Boston College**

EXECUTIVE BOARD - CURATOR/SPEAKER OUTREACH AND DEVELOPMENT

Oct. 2017 - Present

• Responsible for contacting, interviewing, selecting and preparing speakers for a TEDx event at Boston College in the Spring of 2018

### 4Boston Volunteers of Boston College

COUNCIL MEMBER

Sep. 2015 - Present

- Serve as an activities coordinator at the Mattapan Early Elementary School where I lead activities for the students to do during enrichment period
- As part of council, I am responsible for leading a group of 15 students who also serve at the MEES through weekly reflections, as well as attending weekly council reflections and providing input on the club's decision-making process

# Projects\_

#### Automated Cryptanalysis of a Monoalphabetic Cipher

• Designed and implemented a probabilistic algorithm that analyzes the distribution of letter frequency to exploit the insecurities of this encryption method and return a decrypted text upon completion

#### Technical Skills

Programming Languages: C, InterSystems ObjectScript, Java, Python

Web Development: AngularJS, Bootstrap, HTML, CSS, JavaScript, JQuery, PHP

Database: InterSystems Caché, SQL

Other: GitHub, LaTex, Microsoft Office, Perforce, Quartus Prime, RESTful APIs