

# KRITHARAKIS EMMANOUIL

56 Ridgemont Str, Boston 02134

(+1)617-602-3804 ♦ kritharakismanolis@gmail.com

## EDUCATION

---

**Boston University (BU)**, Boston, USA

*September 2021 - present*

Msc & PhD in Computer Science (CS)

- Concentration: Representation learning on unbounded graphs.
- Relevant Coursework: User-centric Systems for Data Science, Random Computing, Tools for Data Science, Data Stream Processing and Analytics

**Technical University of Crete (TUC)**, Chania, Greece

*October 2014 - October 2019*

Bsc & Msc in Electrical & Computer Engineering (ECE) (5-year joint degree; 300 ECTS)

- Grade: 9.4/10 "Distinction", Salutatorian in 2014 class (2nd out of 222 students)
- Concentration: Computer Science
- Relevant Coursework: Statistical Modeling & Pattern Recognition, Databases, Algorithms and Complexity, Artificial Intelligence, Probability Theory & Statistics

Thesis title: "Automatic Multi-Document Text Summarization", (Thesis Grade: 10/10)

## PROFESSIONAL & RESEARCH EXPERIENCE

---

**PhD candidate at Boston University, Boston, USA**

September 2021 - present

*Research Assistant at CASP system Lab*

- Working under the supervision of Dr. Kalavri on representation learning on graphs.
- In collaboration with Samsung, research is focused on handling unbounded graph streams through graph neural networks (GNNs) turning them into embeddings for downstream machine learning applications.
- Working on efficient ways to restore the necessary graph data from SSD disks for training GNNs to construct the graph embeddings.

**Hellenic National Defence General Staff, Athens, Greece**

September 2020 - June 2021

*Database Administrator*

- Worked under the "Unified distributed army mail system" project, by interconnecting the military servers all around Greece to be able to send documents through a web app in the private greek army network.
- Extensive use of PL/SQL for Oracle database and Microsoft SQL Server for testing and development.

**LeasePlan, Athens, Greece**

December 2019 - September 2020

*Software Database Engineer*

- Worked under the "Turn Around" project by updating the corporate software with over 40 user-call database features and was responsible for two intercorporate projects:
  - Estimated rented car's cumulative kilometers.
  - Built an webservice called E-Acceptance for automated acceptance of new clients.
- Extensive use of Python, SQL and RPG language for testing and development.

**Internship CERN, Geneva, Switzerland**

June 2019 - September 2019

*Summer Research Intern*

- Worked with the EP-SFT group on a generative machine learning model (Variational Autoencoder) to speed-up a high energy physics experimental simulation tool named GEANT4.
- Gathered, pre-processed & analyzed 3D pictures of sub-particles energy distribution using GEANT4.
- Data Visualization of energy sub-particles distributions with CERN's ROOT software.

**Thesis Research, Chania, Greece**

February 2019 - October 2019

- Gathered, pre-processed & analyzed textual data using Natural Language Processing techniques.
- Built a sentence similarity algorithm based on the semantic and the syntactic nature of sentences.
- Incorporated the sentence similarity algorithm in a state-of-the-art multi-document machine learning model.

- Compared multiple documents summaries using several automatic textual evaluation metrics named ROUGE.

## HONORS & AWARDS

---

**Onassis Foundation Scholarship (2021)** for supporting my studies as a Ph.D. candidate at Boston University Computer Science Department.

**ANEK Lines Scholarship (2019)** for completing my studies in ECE School of Technical University of Crete as a saluatorian in the class of 2014.

**Excellence Award (2019)** from ECE School of Technical University of Crete for completing my studies as a saluatorian in the class of 2014.

**National Electrical & Computer Engineering Competition (2017)** 3<sup>rd</sup> place award in ECESCON 10 finals among ECE students teams from universities all over Greece.

**Excellence Award (2015)** in studies of ECE School of Technical University of Crete for receiving the highest grade (9.25/10) of the class of 2014 in my second year of studies.

## LANGUAGES

---

- **English** (Fluent), **German** (Intermediate), **Greek** (Native)

## TECHNICAL STRENGTHS

---

**Software & Tools** Python, Pytorch, Keras,Django, SQL, Java, C, RPG , Matlab, R, Git, Linux, Latex

## SOCIETIES & AFFILIATIONS

---

- IEEE (Global association for electrical engineering), Member of TUC student branch (2015-2019).