

# KONSTANTINOS GEORGIU

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## INTRODUCTORY PROFILE

Third-year PhD student in Data Science and Engineering at the University of Tennessee, with a particular emphasis on computer vision and machine learning. I am conducting leading-edge research on transient remote sensing data as part of a project sponsored by IARPA SMART. I have contributed to the field with two papers on Contrastive Learning and Representation Learning with Masked Image Modeling techniques. Beyond my academic work, I have two years of professional experience in roles as a software and data engineer.

## CORE COMPETENCIES AND TECHNOLOGIES

<b>Languages:</b>	Python, Shell, Node.js, Java
<b>Frameworks/Tools:</b>	Pytorch, TensorFlow, Apache Spark, Kafka, Django, Docker, Hadoop
<b>Databases:</b>	MySQL, MongoDB, PostgreSQL/Vertica, HBase
<b>Services:</b>	Cloud (AWS, GCP), CI and Automation (Jenkins, Travis CI, Circle CI)
<b>Skills:</b>	Research, Computer Vision/Machine Learning, Data Analysis, Software Design

## PROFESSIONAL EXPERIENCE

University of Tennessee – US	Jan 2021 – Now
<b>Graduate Research Assistant</b>	

Researching cutting-edge computer vision topics at the [AICIP Lab](#) of Dr. Hairong Qi; established a strong research mentality while working alongside brilliant people with invaluable insights into the field.

### Key achievements

- Collaborated to develop a contrastive learning framework for pixel-level semantic segmentation on multi-band satellite images, leading to a second-author paper published in [IEEE WACV 2023](#).
- Published a paper focusing on Masked Image Modeling and Contrastive Learning techniques in NeurIPS 2023.
- Compiled a comprehensive review of the history and current state of Object detection and Tracking as part of my qualifying exam.

Performance Technologies S.A. – Greece	May 2019 – Dec 2020
<b>Software/Big Data Engineer</b>	

Worked for 1.5 years as a Software and Big Data Engineer, cultivating soft skills while training and supervising small teams and handling communication and goal setting with demanding clients.

### Key achievements

- Developed and maintained a large project for the biggest telecommunication provider in Greece, designed to replicate terabytes of data from hundreds of sources into a data lake with low latency and resiliency in mind.
- Coached the construction of a deep learning model that predicts the fulfillment time of orders using a highly dynamic dataset.
- Led the development, testing, and delivery of a large-scale service for benchmarking and crediting the SIP call quality of the Public Sector in Greece.

Global Voices Ltd – UK	Feb - Dec 2017
<b>Software Engineer</b>	

Worked for 9 months (first 3 months as an intern - awarded the Erasmus+ Placement scholarship) as a Software Engineer and showcased my ability to adapt and learn in a dynamic environment which led to my first full-time job offer.

### Key achievements

- Contributed to developing and maintaining the company's proprietary content management system, handling tasks such as bug fixing, feature development, and code reviews.
- Assisted with implementing and maintaining the company's continuous integration and deployment pipelines, improving the efficiency and reliability of product releases.

## EDUCATION

University of Tennessee – Knoxville, TN, US	Jan 2021 - Now
<b>Ph.D. in Data Science and Engineering</b>	

- Attained a deep understanding of statistical modeling, Bayesian formulation, and hidden Markov models by completing challenging coursework.
- Designed bare-bone implementations of various classical and deep learning models, including CNNs and AEs, to gain strong intuition on the low-level technicalities of these models.
- Successfully coordinated and worked on a range of group projects: transformer-based text generation and question answering, vaccination rate prediction, and reinforcement learning agents that play Minecraft, prioritizing efficient task allocation and high-quality delivery.

**Integrated Master's in Computer Engineering and Informatics**

- Demonstrated proficiency in conducting research by devising an innovative approach for scaling a previously thought non-scalable community detection algorithm, [published](#) as the first author in a peer-reviewed journal.
- Excelled in academic projects and programming competitions, demonstrating skills in algorithm design, data structures, and classical machine learning.
- Completed highly demanding coursework in Numerical Analysis, Signal Processing, Operating Systems, Compilers, and Distributed Computing to cement strong computer science foundations.

**CERTIFICATIONS**

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| • Intel Edge AI Foundational Course Scholarship (Udacity)              | 2020 |
| • GRE (Quant: 165, Verb: 151, W: 3.5)                                  | 2019 |
| • Docker and Kubernetes: The Complete Guide (Udemy)                    | 2019 |
| • IELTS: 7.5   | 2018 |
| • The Ultimate Hands-On Hadoop - Tame your Big Data! (Udemy)           | 2018 |
| • Data Science, Deep Learning and Machine Learning with Python (Udemy) | 2018 |
| • MongoDB Essentials - Complete MongoDB Guide (Udemy)                  | 2018 |
| • Google Developer Challenge Scholarship: Android Basics (Udacity)     | 2017 |
| • BerkeleyX: CS105x Introduction to Apache Spark (EdX)                 | 2016 |