# MUSTAFA DOGAN

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## EDUCATION

**Hacettepe University**                                                      2021-2024
Master's in Science in Computer Engineering | GPA: 3.64/4.0                   *Ankara, Turkey*
Graduate Thesis: *Evaluating Zero-Shot Learning Capabilities of Vision-Language Models*
Advisors: Erkut Erdem, Aykut Erdem

**Konya Food and Agriculture University**                                     2016-2021
Bachelor's in Science in Computer Engineering | GPA: 3.72/4.0                 *Konya, Turkey*
2$^{nd}$ highest rank in the faculty, High Honor
Recipient of merit-based full scholarship by Dean's Office
Graduation Project: *Autonomously Navigated Agent Using Reinforcement Learning*
Advisors: Kasim Oztoprak

## PUBLICATIONS

[1] **Mustafa Dogan**, Ilker Kesen, Iacer Calixto, Aykut Erdem, and Erkut Erdem. *Evaluating Linguistic Capabilities of Multimodal LLMs in the Lens of Few-Shot Learning.* 2024. URL: `https://arxiv.org/abs/2407.12498`.

[2] Ilker Kesen, Andrea Pedrotti, **Mustafa Dogan**, Michele Cafagna, Emre Can Acikgoz, Letitia Parcalabescu, Iacer Calixto, Anette Frank, Albert Gatt, Aykut Erdem, and Erkut Erdem. "ViLMA: A Zero-Shot Benchmark for Linguistic and Temporal Grounding in Video-Language Models". In: *International Conference on Learning Representations (ICLR)*. 2024.

[3] **Mustafa Dogan**, Kasim Oztoprak, and Mehmet Resit Tolun. "Teaching computer architecture by designing and simulating processors from their bits and bytes." In: *PeerJ Computer Science* 10 (2024), e1818. DOI: `https://doi.org/10.7717/peerj-cs.1818`.

[4] **Mustafa Dogan**, Omer Metin, Elif Tek, Semih Yumusak, and Kasim Oztoprak. "Speculator and Influencer Evaluation in Stock Market by Using Social Media". In: *2020 IEEE International Conference on Big Data (Big Data)*. 2020, pp. 4559–4566. DOI: `10.1109/BigData50022.2020.9378170`.

## EXPERIENCE

**Aselsan**                                                                   November 2021 - Present
*Software Engineer*                                                           *Ankara, Turkey*

· Led the *Coding Assistant* project for use on the internal network, helping developers streamline coding tasks.
· Fine-tuned *CodeGen2.5* with code samples, enhancing its effectiveness in tasks such as *code completion*, *unit test generation*, and *comment generation*.
· Implemented user interface with *Chainlit* for optimal performance.

**Morten Inc.**                                                              June - September 2020
*Machine Learning Engineer Intern*                                           *Istanbul, Turkey*

· Pioneered the creation of a Knowledge Graph cataloging authors and their citations from academic papers stored in a *MongoDB* database, devising a *GPT-2*-powered *Python* scripting.
· Developed an application with *GPT-2* to identify future tasks within academic papers, facilitating paper clustering.

**Michigan State University**                                                August-September 2018
*Laboratory Assistant Intern*                                                *MI, USA*

· Conducted analysis, utilizing *Python* libraries (*matplotlib, Seaborn*), to explore the relationship between sleeping patterns and eating habits.
· Applied *Bayes Theorem* and *MS Office* to evaluate test results, offering insights to collaborating companies.

## PROJECTS

### Speculator Finder

· Identified *NASDAQ* market speculators and influencers by analyzing nearly *3.4 million* distinct user tweets on company-related topics.
· Utilized *Selenium* library to gather tweet data, user details, and engagement metrics, storing them in an *SQLite Database.*
· Employed *tfidf vectorizer* and machine learning algorithms, predominantly *SVM,* for tweet vectorization and clustering.

## VOLUNTEERING ACTIVITIES

**Erasmus Youth Exchange**                                                    October 2019
*Participant*                                                                  *Perugia, Italy*

· Engaged actively in the "Interstellar Inclusion" Youth Exchange project, fostering understanding and combatting *racism* and *xenophobia* through peer-to-peer experiences.
· Collaborated in a theater performance involving a diverse group from various countries, addressing challenges related to accessing education in different societal contexts.
· Created and edited an *award-winning* short film on the theme of Freedom, receiving the 'Best Movie' accolade among five nominated films.
· Delivered a presentation on migration in Turkey to 30+ youngsters from diverse backgrounds.

**Erasmus Youth Exchange**                                                    May 2018
*Participant*                                                                  *Tallinn, Estonia*

· Participated in the "Sail Entrepreneurship" Youth Exchange project, collaborating with participants from various countries.
· Contributed to ideation and development of business concepts focusing on social entrepreneurship using the *Business Canvas Model.*
· Overcame cultural and language barriers by fostering open communication and encouragement among a group of 35+ participants.

## ADDITIONAL EXPERIENCE

**KFAU Robotics Club,** Member of Board                          January 2019 - September 2021
**IEEE KFAU Student Branch,** Founding President                 January 2018 - October 2019
**International Youth Camp,** Participant                                        August 2017