

# Zoe Kotti

PHD CANDIDATE · ASSOCIATE RESEARCHER

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## Education

### PhD in Machine Learning and Software Engineering

Athens, Greece

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

Apr 2020–Sep 2024 (expected)

Supervisor: Prof. Diomidis Spinellis

Scholarship award from the Hellenic Foundation for Research and Innovation

Completed graduate coursework: Applied Machine Learning, Deep Learning, Natural Language Processing, Research Methodology

### BSc in Management Science and Technology

Athens, Greece

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS

Sep 2015–Jan 2020

Grade: 8.91/10.0 ("Excellent")

Thesis: *Implementation of Lexicon-based Sentiment Analysis on Greek Text Data*

Supervisor: Prof. Diomidis Spinellis

## Research Interests

I conduct research in the areas of machine learning and software engineering. I am particularly interested in the development of natural language processing methods for software engineering tasks.

## Honors and Awards

2022–2024 **PhD Scholarship Award**, Hellenic Foundation for Research and Innovation

Athens, Greece

2022 **ACM SIGSOFT CAPS Grant**, ICSE '22

Pittsburgh, USA

2022 **ACM SIGSOFT Support Grant**, Student Mentoring Workshop at ICSE '22

Pittsburgh, USA

2021 **ACM SIGSOFT Distinguished Service Award**, ESEC/FSE '21 Web Co-Chair

Online

2019 **ACM SIGSOFT Distinguished Paper Award**, *Standing on shoulders or feet? The usage of the MSR data papers*

Montreal, Canada

2019 **ACM SIGSOFT CAPS Grant**, ICSE '19

Montreal, Canada

2019 **Research Scholarship Award**, General Secretariat for Research and Innovation

Athens, Greece

## Work Experience

### Associate Researcher

Athens, Greece

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS, BALAB

Jun 2020–22

Project: Fine-Grained Analysis of Software Ecosystems as Networks (FASTEN)

Supervisor: Prof. Diomidis Spinellis

### Junior Researcher

Athens, Greece

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS, BALAB

Jul 2019–Dec 2019

Project: Developer-centric Knowledge Mining from Large Open-source Software Repositories (CROSSMINER)

Supervisor: Prof. Diomidis Spinellis

### Back-end Developer Intern

Athens, Greece

ISMOOD DATA TECHNOLOGY SERVICES

Mar 2019–Jun 2019

Worked on a project regarding the implementation of lexicon-based sentiment analysis on Greek text data. Particularly, I constructed a Greek lexicon annotated with sentiment, and an algorithm for the application of sentiment analysis. The technologies used were MongoDB and Python 2.7.

## Teaching Assistance

### Unix Tools: Data, Software and Production Engineering

Online

DELFTX, EDX (INTERMEDIATE LEVEL)

Mar 2020–Present

Setting up the course structure on the edX platform, answering learners' questions and resolving their requirements, refining and maintaining any outdated course content, improving assignments' format, and collaborating with the edX management team and the course instructor to ensure a smooth learning experience for the learners.

### Software Engineering in Practice

Athens, Greece

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS (UNDERGRADUATE LEVEL)

Spring 2020–21, 2021–22

Organizing and conducting the course labs, distributing and assessing students' individual assignments, assisting students in their group and personal projects, and assessing their overall performance.

### Software Architecture

Delft, Netherlands

DELFT UNIVERSITY OF TECHNOLOGY (GRADUATE LEVEL)

Spring 2021–22

Assisting and guiding a number of student teams in their group projects through 30-minute online sessions by answering their questions, and giving feedback on their progress, the setup of their reports, and their open source contributions.

## Conference Committee Service

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### Organizing Committees

- ESEC/FSE '21: Web Co-Chair (ACM SIGSOFT Distinguished Service Award)

### Program Committees

- ICSE '23: Artifact Evaluation PC Member
- MSR '22: Shadow PC Member
- MSR '21: Mining Challenge PC Member

### External Review Committees

- ISSTA '22: External Reviewer in Technical track

### Panel Sessions

- ESEC/FSE '21: Panelist of Mini-panel on *Human Aspects—Research Trends in Software Engineering*
- ESEC/FSE '21: Session Chair of Ask Me Anything in *Diversity and Inclusion Events*

### Volunteering

- ICSE '22: In-Person Student Volunteer
- SPLASH '19: Student Volunteer

## Competition Participation

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### World of Code Hackathon 2022

UNIVERSITY OF TENNESSEE, CARNEGIE MELLON UNIVERSITY, UNIVERSITY OF TARTU

Pittsburgh, USA

May 21–22, 2022

Group project topic: *Contributor analysis in enterprise-driven OSS projects*

The purpose of this project was to analyze the influence of non-enterprise-affiliated contributors to enterprise-driven OSS projects. Particularly, we aimed to investigate the following project characteristics from contributors' perspective: commit frequency, contribution size, and activity distribution.

## Skills

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**Programming** Python (expert), Java (intermediate), Shell Scripting (expert), SQL (expert), MongoDB (intermediate), LaTeX (expert)

**Frameworks** Pandas, Scikit Learn, TensorFlow, Keras, PyTorch

**Languages** Greek (native), English (C2), French (B2)

## Publications

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### Peer-reviewed Journal Articles

- **Zoe Kotti**, Rafaila Galanopoulou, and Diomidis Spinellis. Machine Learning for Software Engineering: A tertiary study. *ACM Computing Surveys*, pages 1–37, November 2022. doi:10.1145/3572905. (JCR Impact Factor: 14.32)
- **Zoe Kotti**, Georgios Gousios, and Diomidis Spinellis. Impact of software engineering research in practice: A Patent and author survey analysis. *IEEE Transactions on Software Engineering*, pages 1–19, September 2022. doi:10.1109/TSE.2022.3208210. (JCR Impact Factor: 6.226)
- Georgios Liargkovas, Angeliki Papadopoulou, **Zoe Kotti**, and Diomidis Spinellis. Software engineering education knowledge versus industrial needs. *IEEE Transactions on Education*, 65(3):419–427, August 2022. doi:10.1109/TE.2021.3123889. (JCR Impact Factor: 2.116)
- **Zoe Kotti**, Konstantinos Kravvaritis, Konstantina Dritsa, and Diomidis Spinellis. Standing on shoulders or feet? An extended study on the usage of the MSR data papers. *Empirical Software Engineering*, 25(5):3288–3322, July 2020. doi:10.1007/s10664-020-09834-7. (JCR Impact Factor: 3.156)

### Conference Publications

- Diomidis Spinellis, **Zoe Kotti**, and Audris Mockus. A dataset for GitHub repository deduplication. In *17th International Conference on Mining Software Repositories*, MSR '20, pages 523–527, New York, NY, USA, June 2020. Association for Computing Machinery. doi:10.1145/3379597.3387496. (CORE Rank: A, Acceptance Rate: 44%)
- Diomidis Spinellis, **Zoe Kotti**, Konstantinos Kravvaritis, Georgios Theodorou, and Panos Louridas. A dataset of enterprise-driven open source software. In *17th International Conference on Mining Software Repositories*, MSR '20, pages 533–537, New York, NY, USA, June 2020. Association for Computing Machinery. doi:10.1145/3379597.3387495. (CORE Rank: A, Acceptance Rate: 44%)
- Audris Mockus, **Zoe Kotti**, Diomidis Spinellis, and Gabriel Dusing. A complete set of related git repositories identified via community detection approaches based on shared commits. In *17th International Conference on Mining Software Repositories*, MSR '20, pages 513–517, New York, NY, USA, June 2020. Association for Computing Machinery. doi:10.1145/3379597.3387499. (CORE Rank: A, Acceptance Rate: 44%)
- **Zoe Kotti** and Diomidis Spinellis. Standing on shoulders or feet? The usage of the MSR data papers. In *16th International Conference on Mining Software Repositories*, MSR '19, pages 565–576, Piscataway, NJ, USA, May 2019. IEEE Press. ACM SIGSOFT Distinguished Paper Award. doi:10.1109/MSR.2019.00085. (CORE Rank: A, Acceptance Rate: 25%)