

# Dhimitrios Duka

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## EDUCATION

### SAARLAND UNIVERSITY

M.Sc. IN COMPUTER SCIENCE

Oct. 2023 - Present

Saarbrücken, GER

### POLYTECHNIC UNIVERSITY OF TIRANA

B.Sc. IN COMPUTER ENGINEERING

Oct. 2018 - Mar. 2022

Tirana, AL

## SKILLS

### PROGRAMMING

Languages:

Java • Python • JavaScript • TypeScript • SQL • C • C++ •  $\text{\LaTeX}$

Frameworks:

Spring Boot • Flyway • JUnit • Mockito • Liferay • NestJS • NextJS • Pytorch

Libraries:

Bootstrap • JQuery • Thymeleaf • Lombok • Prisma

Miscellaneous:

Git • Activiti • Maven • Docker • JPA • Tailwind CSS

## EXPERIENCE

### SCIANT | SOFTWARE ENGINEER

Aug. 2023 - Oct. 2023 | Tirana, AL

- Worked on an integration project for Protel, utilizing Amazon S3 and Spring Boot as the backend framework, with DynamoDB as the database.
- Accomplished seamless data integration, performance optimization, and maintained comprehensive documentation.

### DIGITSAPIENS | SOFTWARE ENGINEER

Aug. 2021 - Jul. 2023 | Tirana, AL

- Developed and maintained the Unified Patent Court e-justice system, which digitalizes the process of deciding on the infringement and validity of Unitary Patents and classic European Patents.
- Demonstrated expertise in identifying and resolving bugs resulting in significant performance gains.
- Successfully ported an existing monolith to a microservices' architecture for an internal project, resulting in improved scalability and maintainability.

### IKUBINFO | SOFTWARE ENGINEER INTERN

May 2021 - Jun. 2021 | Tirana, AL

- Designed and implemented an application leveraging a Model-View-Controller architecture.
- Utilized Spring Boot, and its complementary frameworks for the back-end and Thymeleaf for the front-end development.

## PROJECTS

Oct. 2023 - Feb. 2024

- Developed Zeus, a ray tracer utilizing the Lightwave framework, as the final project for the Computer Graphics course at Saarland University.
- Implemented various rendering techniques, materials, and camera functionalities.
- Utilized acceleration structures and parallel execution to optimize the performance.

**ZEUS** Oct. 2023 - Feb. 2024

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- Utilized acceleration structures and parallel execution to optimize the performance.

**IMAGE CAPTION GENERATOR** Sep. 2021 - Mar. 2022

- Built and trained a Machine Learning model for automatically generating image captions in Albanian.
- Leveraged an existing dataset with English captions and employed a pre-trained Neural Machine Translation model to automatically translate the captions to Albanian.
- Utilized an existing Encoder-Decoder architecture.

## HONORS/AWARDS

2024

First place winner of the Computer Graphics rendering competition at Saarland University in the winter semester of 2023-2024.