

Pavlos Makridis

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📍 Delft, The Netherlands

🌐 <https://github.com/PavlosMak>

👤 Profile

Research-oriented Computer Science Master's student with a passion for computer graphics and computer vision. Excited to create systems for recreating and analyzing our world digitally.

🎓 Education

Master's Computer Science, Delft University of Technology

09/2022 – present

Member of the Honours Programme

Current GPA of 8.96/10.

Bachelor's Computer Science and Engineering,

Delft University of Technology

2019 – 2022

Cum Laude with a GPA of 8.54/10.

Thesis: *Ambient Light Caching via Approximate Photon Mapping*, awarded a 9/10.

🔬 Research & Teaching Experience

Indian Institute of Science, Research Intern

07/2023 – 09/2023 | Bengaluru, India

- Submitted for publication at ACM/IEEE Conference on Cyber Physical Systems (review pending)
- Worked on establishing a long-distance haptic teleoperation link connecting The Netherlands to India.
- Responsible for the robotics and environment capture aspects of the project, using ROS2, PCL and Bullet Physics

SERG Technical University of Delft, Research Assistant ✉

04/2021 – 07/2022 | Delft, Netherlands

- Published at IEEE/ACM 44th International Conference on Software Engineering
- Core developer and designer of TestKnight, an open-source testing plugin for the IntelliJ IDEA IDE.
- Worked on static analysis applications with parsing technologies such as the IntelliJ PSI and ANTLR v4.

Technical University of Delft, Teaching Assistant

09/2020 – present | Delft, Netherlands

- Helped students better understand Computer Science topics by answering questions about each course's material and assignments.
- Worked on the courses: Visual Data Processing (*Head Teaching Assistant*), Computer Graphics, Object-Oriented Programming, Computer Organisation and Reasoning & Logic.

👜 Industry Experience

Extension School Technical University of Delft,

Data Analytics Assistant

09/2021 – 09/2022 | Delft, Netherlands

- Worked on developing a data analytics ETL pipeline with Python, Pandas, SQL, Docker and Apache Airflow to analyse data from over 3.5 million learners.
- Developed various Python scripts for data analysis and delivery.
- Analysed learner data from platforms such as EdX to provide insights to the course designers.

Upstream, Summer Software Engineering Intern

07/2020 – 08/2020 | Athens, Athens

- Designed and implemented a set of different API endpoints using Java and the Spring Boot framework.
- Studied and used Java, Spring Boot, Docker, PostgreSQL and Git.
- Experienced how teams following Agile practices function and collaborate for large scale software system development.

☎ +306979298505

📅 13/02/2001

in <https://www.linkedin.com/in/pavlos-makridis/>

📄 Publications

Utilizing Operator Intent for Intercontinental Bilateral Teleoperation,

ACM/IEEE Conference on Cyber-Physical Systems 2024. (review pending)

TestKnight: An Interactive Assistant to Stimulate Test

EngineeringTestKnight: An Interactive Assistant to Stimulate

Test Engineering, IEEE/ACM 44th International Conference on Software Engineering: Companion Proceedings ✉

05/2022

📁 Projects

Ambient Light Caching via Approximate Photon Mapping ✉

05/2022 – 07/2022

Researched and developed a photon mapping-based approach to create ambient light caches to improve the efficiency of physically based rendering. The project was carried out under Dr. Elmar Eisemann and ir. Mark van De Ruit.

The Unnamed Game Engine ✉

04/2023 – present

OpenGL 3D game engine built with the ENT entity component system with support for shadow mapping, physically based materials, SDF glyph rendering and Bézier curve animations.

🧠 Skills

PyTorch and PyTorch3D

OpenGL

Fluency in Java, Python and C++. Experience with other languages ranging from Javascript and Scala to x86-64 Assembly.

Unity3D

ROS2

Inkscape and Blender 3D for scientific illustrations

Object Oriented Design and Programming

Software Design and Collaborative Development

🏆 Awards

FAST Grant (\$490/€445) for conducting research abroad,

FAST - Funding Ambitious Students TU Delft

Center of Talented Youth Greece Talent Search Award,

Anatolia College/John Hopkins Center for Talented Youth. ✉

Highest Grade and Excellence Awards in High School,

Hellenic Ministry of Education, Research and Religious Affairs

🌐 Languages

Greek • English • French

📜 Certificates

• HarvardX PH526x: Using Python for Research ✉

• Cambridge English Level 3 Certificate in ESOL International (Proficiency)

• Sorbonne Université Certificat Pratique De Langue Française B2

• PADI Rescue Diver ✉

• Primary & Secondary Care CPR/AED/First Aid - Adult ✉