



## Lukas Uzolas

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## EDUCATION

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|---|---|
| <b>M.Sc.   <a href="#">Image Processing and Computer Vision</a></b><br>PPCU, UAM, UBx   | Sep. 2019 – Sep. 2021<br>Hungary, Spain, France |
| <ul style="list-style-type: none"> <li>Fully funded Erasmus Mundus Joint Master Degree at the University of Bordeaux, Autonomous University Madrid, and Pázmány Péter Catholic University</li> <li>Thesis written at VCG SEAS, Harvard University</li> <li>Thesis topic: Meta-Learning for Domain Generalization with Style-based Parameter Prediction in Biomedical Image Segmentation [<a href="#">thesis</a>]</li> <li>Graduated with an equivalent of first-class honours and distinction (4.97/5)</li> </ul> |   |
| <b>B.Sc.   <a href="#">Human-Computer-Interaction</a></b><br>University of Hamburg  | Oct. 2015 – Jun. 2019<br>Hamburg, Germany       |
| <ul style="list-style-type: none"> <li>Fundamentals of computer science and psychology</li> <li>Active participation in the faculty as a student representative, hosting of events, and tutoring during the introduction week</li> <li>Thesis Topic: Evaluation of Grayscale Hand Gesture Segmentation with Fully Convolutional Neural Networks [<a href="#">thesis</a>]</li> <li>Graduated with an equivalent of first-class honours and an outstanding degree (best of cohort)</li> </ul>                       |   |

## EXPERIENCE

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|---|---|
| <b>Master Thesis Research Intern (Remote)</b><br><a href="#">VCG SEAS, Harvard University</a>   | Feb. 2021 – Jun. 2021<br>Boston, USA      |
| <ul style="list-style-type: none"> <li>Research internship to conduct my Master's thesis at Hanspeter Pfisters' Visual Computing Group, Harvard University under the supervision of Donglai Wei</li> <li>Image segmentation involving generative models and Domain Generalization with PyTorch and Tensorflow</li> <li>Due to the ongoing Covid19 pandemic, conducted remotely</li> </ul> |   |
| <b>Research Intern</b><br><a href="#">Medic</a>   | Jul. 2020 – Sep. 2021<br>Madrid, Spain    |
| <ul style="list-style-type: none"> <li>Research and implementation of algorithms extracting features of the eyes from high speed cameras with Matlab</li> </ul>   |   |
| <b>Working Student Backend Development</b><br><a href="#">BOOM GmbH</a>   | Oct. 2018 – Feb. 2019<br>Hamburg, Germany |
| <ul style="list-style-type: none"> <li>Web development in a diverse team and fast-paced environment</li> <li>Responsible for conceptualization and implementation of Backend applications with Node.js, Alexa, AWS, Python, Linux, REST APIS, and data visualization libraries</li> </ul>   |   |

- Project, Working Student Fullstack Development** Feb. 2018 – Jul. 2019  
**Daimler AG** Stuttgart, Germany
- Conceptualization of two intelligent car configurator Proofs-of-Concept for smart and Vans involving a chatbot based on IBM Watson
  - Responsible for software architecture and implementation of the Backend in NodeJs
  - Presentation of Proof-of-Concept on the Mobile World Congress 2018 in Barcelona
- Working Student Fullstack Development** Oct. 2017 – Jan. 2018  
**Senacor Technologies** Hamburg, Germany
- Agile Development of software for internal use in the company
  - Programming with JavaScript, Vue.js, C#, and MySQL
- Student Supervisor in Software Development** Oct. 2016 – July. 2017  
**University of Hamburg** Hamburg, Germany
- Supervision and examination of student's homework and preparation of educational materials
  - Teaching Object-oriented programming with Java, BlueJ, and Eclipse to students

## AWARDS AND HONOURS

- M.Sc. Honours Degree (Distinction)** Sep. 2021  
Honours degree by the Pázmány Péter Catholic University, grade: 4.97/5.
- Erasmus Mundus Master Scholarship** Sep. 2019  
Fully funded graduate studies, with an acceptance rate below 5 percent
- Outstanding B.Sc. Degree in Human-Computer-Interaction** Jun. 2019  
Best HCI degree in the summer semester of 2019 according to GPA

## PUBLICATIONS

**Deep Anomaly Generation: An Image Translation Approach of Synthesizing Abnormal Banded Chromosome Images**, arXiv 2021.

Lukas Uzolas\*, Javier Rico\*, Pierrick Coupé, Juan C. SanMiguel, and György Cserey  
\*: *first authors*, [[arXiv](#)]  
*(In review)*

**Scale & Walk: Evaluation of scaling-based interaction techniques for natural locomotion in VR**, Mensch und Computer 2018.

Boysen, Yannic\*; Husung, Malte\*; Mantei, Timo\*; Müller, Lisa-Maria\*; Schimmelpfennig, Joshua\*; Uzolas, Lukas\*; Langbehn, Eike;  
\*: *equal contribution*, [[paper \(German\)](#)]

Original title (German): Evaluation von skalierungsbasierten Interaktionstechniken zur natürlichen Fortbewegung in VR

## CONFERENCE PARTICIPATIONS

- Conference on Computer Vision and Pattern Recognition** 2021  
Student Participant
- European Conference on Computer Vision** 2020  
Student Participant
- Mensch und Computer** 2018  
Author and Student Volunteer

## ADDITIONAL RELEVANT PROJECTS

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- Face Manipulation through Projection of Facial Landmarks** 2021
- Projection of facial landmarks into pre-trained StyleGAN2 latent space and FAN with PyTorch [[github](#)]
- Banded Chromosome Segmentation Mask Generation** 2020
- Banding pattern extraction repository for Deep Anomaly Generation, written in Python and OpenCV. Can be used as a Python package or via command line [[github](#)]
- 3D Reconstruction of a Scene Through Multiple Images** 2020
- Implementation and report of a whole 3D reconstruction pipeline of a natural scene. The report received the highest grade in the cohort [[report](#)]
- Object Tracking/Localisation with the Kalman Filter** 2020
- Implementation of object tracking with the Kalman filter in C++ [[gitfront](#)]
- Replication-Study & Extension of PerceptionNet** 2019
- Implementation and replication study of PerceptionNet in Keras. Human activity classification based on temporal multimodal. [[github](#)] [[report](#)]

## EXTRACURRICULAR AND VOLUNTEERING

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- Class Representative** 2019 - 2021
- M.Sc. Image Processing and Computer Vision Hungary, Spain, France
- Organisation and communication between students and university entities
- Voluntary Tutor** Aug. 2018 - Jul 2019
- Fördern und Wohnen Hamburg
- Tutoring children from refugee families in maths, German, and English.
- Organisation of Faculty Events** Oct. 2015 - Jun. 2019
- University of Hamburg Hamburg
- Actively participated in the student-faculty by co-organizing the introduction week three years, and hosting different faculty events such as the yearly Christmas celebration and [hackathons \(German\)](#)

## SKILLS

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**Languages:** German (Native), English (C1), Lithuanian (B2), Spanish (A2)

**Programming:** Python, Javascript, Node.js, Java, MATLAB, C++ (Beginner), Databases, Web Development, Rest APIs

**Frameworks:** OpenCV, PyTorch, Keras, Tensorflow v.1, Scikit, Numpy, Matplotlib

**Tools:** Git, Linux, Windows, LaTeX, Command Line

**Soft Skills:** Teamwork, Self-organised Working, Presenting, Adaptability, Teaching, Organisation, Scientific Writing, Clear Communication

## HOBBIES

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**Sports:** Jogging, Tennis, Hiking, Snowboarding

**Creative Programming:** [Sinus Waves](#), [Dancing Deers](#), [Games involving my cousins](#)

**Board Games, Pen and Paper**