# Curriculum Vitae

## General Information

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|---|---|
| First and Last Name | **Dr. Mikel Sagardia** |
| Email | sagardia.mikel@gmail.com |
| Website · Linkedin · Github | mikelsagardia.io · www.linkedin.com/in/mikel-sagardia/ · github.com/mxagar |

## Work Experience

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| Period | 2022.04.01 – present (11 months) |
| Position Held | **Computer Vision and Machine Learning Engineer** |
| Employer | **Self Employed** |
| Main Activities and Responsibilities | – Contract work building machine vision and machine learning applications<br>– Consultancy and training on deep learning |
| Period | 2020.05.01 – 2021.12.31 (1 year and 8 months; currently on leave) |
| Position Held | **Senior Researcher** |
| Employer | **Vicomtech**, Fundación |
| Address of Employer | Mikeletegi 57, 20009 Donostia-San Sebastián (Spain) |
| Main Activities and Responsibilities | – Coordinated and executed European and national projects<br>– Acquired new projects on computer vision, machine learning and robotics<br>– Supervised Ph.D. students |
| Period | 2019.03.01 – 2020.03.31 (1 year and 1 month) |
| Position Held | **Project Engineer in Machine Vision** |
| Employer | **MVTec** Software GmbH |
| Address of Employer | Arnulfstr. 205, 80634 Munich (Germany) |
| Main Activities and Responsibilities | – Managed and developed machine vision projects for key industry partners<br>– Trained customers and distributors on 3D vision and robotics<br>– Presented the Anomaly Detection feature at the MVTec Innovation Day 2020<br>– Provided second level technical support in a broad spectrum of machine vision topics |
| Period | 2008.04.01 – 2018.12.31 (10 years and 9 months) |
| Position Held | **Research Engineer in Robotics** |
| Employer | **German Aerospace Center (DLR)**, Institute of Robotics and Mechatronics |
| Address of Employer | Muenchner Str. 20, 82234 Wessling (Germany) |
| Main Activities and Responsibilities | – Led a 5-year project that built a VR framework for satellite on-orbit servicing<br>– Researched into collision and force computation methods for haptic rendering<br>– Coordinated and executed cooperation projects for industry partners (VW, Bosch)<br>– Published of 22+ papers at IEEE T. on Haptics / ICRA / VR, ACM VRST<br>– Presented robotic applications on trade fairs and congresses (Automatica, VW, etc.)<br>– Supervised 20+ students during their master's theses and internships |
| Achievements and **Awards** | – Best Video Award Finalist at the IEEE ICRA, 2014<br>– Best Paper Award at the 5th International Conference VAMR, 2013<br>– Short Paper Honorable Mention at the IEEE VR, 2012 |



Donostia-San Sebastián, February 2023

## Education and Training

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| Period | 2017.08 – present |
| Qualification | **MOOC Certificates** · github.com/mxagar/course_compilation |
| Selected Courses | – Deep Learning Nanodegree (150+ hours) · Udacity<br>– Computer Vision Nanodegree (120+ hours) · Udacity<br>– Machine Learning DevOps Engineer Nanodegree (150+ hours) · Udacity<br>– IBM Machine Learning Professional Certificate (85+ hours) · Coursera / IBM<br>– Machine Learning (60+ hours) · Coursera / Stanford University<br>– Statistics with Python Specialization (60+ hours) · Coursera / University of Michigan |
| Period | 2013.12 – 2018.11 |
| Qualification | **Ph.D. in Electrical and Information Engineering (Dr.-Ing.), 2019** |
| University | Technische Universität München, TUM (Germany) |
| Dissertation Title | Virtual Manipulations with Force Feedback in Complex Interaction Scenarios |
| Period | 2002.09 – 2008.02 |
| Qualification | **M.Sc. in Mechanical Engineering (Ingeniero Industrial), 2008** |
| Universities | Universidad de Navarra, TECNUN (Spain) and<br>Technische Universität München, TUM (Germany) |
| Achievements, **Awards** and Scholarships | – Second Best Diploma Thesis Prize · Association of Engineers of Gipuzkoa<br>– Erasmus and Leonardo scholarships, exchange student at TUM<br>– High School Excellence Award for university access · Basque Government |

## Technical Skills

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| Programming Languages | Python, C/C++, SQL, Bash, R, Matlab/Simulink |
| Machine Vision | Halcon, OpenCV, PCL |
| Machine Learning | Pytorch, Tensorflow & Keras, Scikit-Learn, Pandas, Matplotlib, Numpy, SciPy, NLTK, spaCy |
| Robotics | ROS, Eigen, Bullet Physics Engine |
| DevOps | Docker, Git & CI/CD, MLflow, W. & Biases, DVC, CMake, GoogleTest & Pytest |
| Web Apps | FastAPI, Flask, Streamlit, HTML & CSS |
| Cloud | AWS (SageMaker, EC2, Lambda, API Gateway, ECR/S, etc.), Heroku |
| Software Design | Object Oriented Programming, Design Patterns |

## Languages

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| Mother Tongues | **Spanish**, **Basque** (*Euskararen Gaitasun Agiria* · EGA) |
| Advanced Level (C1/2) | **German** (*Goethe-Zertifikat C1*), **English** (Certificate in Advanced English · CAE) |

## Additional Information

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| Publications | https://mikelsagardia.io/publications/ |
| Selected Projects | https://github.com/mxagar/project_compilation |