

Marc Benedí

✉ marc.benedi@tum.de | 🌐 http://marcb.pro | 🔗 marcenedi | in marcenedi

Education

Technische Universität München

M.Sc., INFORMATIK

- Specialising in Computer Vision and Machine Learning

Munich, DE

October 2019 - Present

Universitat Politècnica de Catalunya, Barcelona Tech

B.S., COMPUTER ENGINEERING

- Specialising in Computer Science
- **University of Edinburgh**, Edinburgh, UK — *Erasmus+ Spring 2018* - GPA 9.70/10

Barcelona, ES

September 2014 - July 2018

Experience

Visual Computing Laboratory - Technische Universität München

MASTER RESEARCH FELLOWSHIP

- Developing a Convolutional Deep Neural Network to estimate correspondences and perform robust optimization to reconstruct 3D rigid-motions
- Fellowship awarded to outstanding Master students to allow them developing state-of-the-art models

Munich, DE

May 2021 - Present

Visual Computing Laboratory - Technische Universität München

WORKING STUDENT

- Built a high-performance computing cluster for the Deep Learning laboratory using Slurm Workload Manager
- Built a frontend with VUE.js and a backend for the cluster's users

Munich, DE

April 2020 - Present

Helm Mobile

SOFTWARE ENGINEER

- Developed Android and backend using Kotlin and frontend with VUE.js

Barcelona, ES

September 2018 - September 2019

European Organization for Nuclear Research

INTERNSHIP

- Designed a cluster for the BE-OP-LHC team at CERN using Kubernetes

Geneva, CH

June 2019 - September 2018

Universitat Politècnica de Catalunya, Barcelona Tech

UNIVERSITY RESEARCH SCHOLARSHIP

- Worked on a new conversion of Binary Decision Trees to Conjunctive Normal Forms

Barcelona, ES

September 2017 - July 2018

Ernst & Young

INTERNSHIP

- Frontend and backend development

Barcelona, ES

June 2017 - September 2017

JEDI

ANDROID TEACHER

- Taught basic Android development to 25+ students in a 40h course.

Barcelona, ES

Winter/Summer 2017

Awards

Distinctions

- **Universitat Politècnica de Catalunya, Barcelona Tech** - Computer Security (2017), Software Architecture (2017), Operative Systems (2015)
- **University of Edinburgh** - Reasoning Agents (2018), Software Testing (2018)

Hackathons

- **HackUPC**, Barcelona 2017 - GFI Sponsor prize
- **FoodHacks**, Berlin 2016 - First prize, Lidl Sponsor prize
- **Stirhack**, Stirling 2016 - First prize

Projects

Re-implementation of Kinect Fusion

TECHNICAL UNIVERSITY OF MUNICH

2021

- Project part of the lecture 3D Scanning & Motion Capture. Implementing the paper "KinectFusion: Real-Time Dense Surface Mapping and Tracking" to solve large-scale indoor reconstruction in real-time.

Interdisciplinary Project

TECHNICAL UNIVERSITY OF MUNICH

2020

- Extending the paper "Divergence-Free Shape Correspondence by Deformation" and representing a motion sequence as a time dependent vector field. Solving correspondence and matching problems for the whole sequence during the optimisation.

Firefighter Academy

OPOSICIONES BOMBERO

2020

- Online academy for firefighter candidates with +2.000 users
- Android application containing support materials for firefighters

MINT

AMALFI ANALYTICS

2018

- Android application which allows redistributing patients across different hospitals.

Music Language

UNIVERSITAT POLITÈCNICA DE CATALUNYA, BARCELONA TECH

2018

- A compiler and interpreter for music pieces which allows the user to write music and play it or export it to MIDI format

Restia.io

- A software for restaurant's management

Skills

Languages

- English | C1
- Spanish | Native
- Catalan | Native
- German | A1.1

Certificates

- Advanced Certificate, Cambridge Exams, 2019
- Introduction to Deep Learning | JEDI, 2018
- First Certificate | Cambridge Exams, 2017
- Introduction to Android Development | JEDI, 2017
- Introduction to HTML, CSS, JS | JEDI, 2016

Open Source Contributions

- Renderers | Update Dependencies | 2019

Programming Languages and Frameworks

Python, PyTorch, Kotlin, Java, C++, Javascript

Git

Experienced with branches, rebasing, conflicts, release workflow, etc

Android Studio

Familiar with development, testing and debugging

Systems

Self-hosted e-mail server, websites, APIs and VPN

Leadership

Head of formation at Jedi UPC, a university teaching non-profit and Vice-president at FECJE

Teaching

Taught various courses at Jedi UPC and some workshops

Teamwork

Developed multiple production quality projects for third parties

Publications

European Organization for Nuclear Research

Geneva, CH

CONSTRUCTION OF A KUBERNETES CLUSTER IN THE CERN TECHNICAL NETWORK AND AUTOMATING ITS DEPLOYMENT WITH

ANSIBLE

2018

Universitat Politècnica de Catalunya

Barcelona, ES

DESIGN OF AN ENVIRONMENT FOR SOLVING PSEUDO-BOOLEAN OPTIMIZATION PROBLEMS

2018