

# ANIL CELIK MARAL

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## Education

### Technical University of Munich

Master of Science - MS, Informatics: Games Engineering

April 2022 – March 2025

2.065 / 5

### University of California, Santa Cruz

Bachelor of Science - BS, Robotics Engineering

June 2015 – June 2019

1.3 / 5

## Experience

### C++ Developer

Dassault Systemes

April 2024 – Present

Munich, Germany - Hybrid

- Working in the 3D Preparation Operators team that develops the xOptimizePro / DataPrep operations for the 3DEXPERIENCE app.

### Game Developer

Peanut Entertainment

May 2022 – Jan 2024

Ankara, Turkey - Remote

- Developing games using Unity, Unreal Engine and Blender.

### Robotics Engineer

ERISIM A.S.

Jan 2020 – Apr 2022

Ankara, Turkey - On Site

- Drew and designed the P & ID / flow diagrams for gypsum based construction material production plants and wrote programs for the PLC automation systems used in these plants.

### Embedded Systems Engineer Intern

Archer Components

Sep 2019 – Dec 2019

San Francisco Bay Area - On Site

- Developed automation solutions using IoT by utilizing AWS, Arduino, ZigBee, C and various other microcontrollers and programming languages.

### Undergraduate Researcher

University of California, Santa Cruz

Nov 2015 - Jul 2017

Santa Cruz, California - On Site

- Modeled tensegrity robots and sketched them in AutoCAD Inventor and also did stress analysis/simulation of the tensegrity robots using NASA Tensegrity Robotics Toolkit (NTRT). Afterwards, built the prototypes by 3D printing/prototyping for testing.

## Projects

### Differentiable Finite Volume Method

- In my master's thesis, I worked on computational fluid dynamics (CFD) simulations using the finite volume method (FVM). I developed and coded the finite volume method (FVM) solutions for  $\Phi_{Flow}$ , a differentiable PDE solving framework for machine learning, and then published my results.

### Chaos Coaster Video Game

- Developed an 3D FPS in Unity. Models were designed in Blender. The enemies were trained using machine learning using Unity's ML-Agents.

### Stellaris Mod - The Veiled Cluster

- Developed a mod to play in an extra-galactic cluster. The mod comes with story driven events and an additional species trait.

### Implementation of the KinectFusion 2011 by Richard A. Newcombe et al Research Paper

- Implemented the 2011 research paper titled KinectFusion: Real-Time Dense Surface Mapping and Tracking by Richard A. Newcombe et al. using C++, OpenCV and CUDA. Additionally, utilized Eigen3 and FreeImage 3 C++ libraries.

## Skills

Unity, Unreal Engine, Blender, C++, C#, C, Python, Java, MIPS Assembly, Verilog, PLC Ladder Logic, Matlab, AutoCAD, Autodesk Inventor, SolidWorks, Robot Operating System (ROS), Gazebo ROS, OpenCV, CUDA

## Languages

English: Native or Bilingual Proficiency

Turkish: Native or Bilingual Proficiency

German: Elementary proficiency

## Organizations

### Tau Beta Pi, The Engineering Honor Society

Member

May 2018 - Present