# ANIL CELIK MARAL

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## Education

**Technical University of Munich**     **April 2022 – March 2025**
*Master of Science - MS, Informatics: Games Engineering*     *2.065 / 5*

**University of California, Santa Cruz**     **June 2015 – June 2019**
*Bachelor of Science - BS, Robotics Engineering*     *1.3 / 5*

## Experience

**C++ Developer**     **April 2024 – Present**
*Dassault Systemes*     *Munich, Germany - Hybrid*
- Working in the 3D Preparation Operators team that develops the xOptimizePro / DataPrep operations for the **3DEXPERIENCE** app using C++.

**Game Developer**     **May 2022 – Jan 2024**
*Peanut Entertainment*     *Ankara, Turkey - Remote*
- Developing games using **Unity**, **Unreal Engine** and **Blender**.

**Robotics Engineer**     **Jan 2020 – Apr 2022**
*ERISIM A.S.*     *Ankara, Turkey - On Site*
- Drew and designed the **P & ID / flow diagram**s for **gypsum based construction material production plants** and wrote programs for the **PLC automation systems** used in these plants.

**Embedded Systems Engineer Intern**     **Sep 2019 – Dec 2019**
*Archer Components*     *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**     **Nov 2015 - Jul 2017**
*University of California, Santa Cruz*     *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-Agent**s.

**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