

Jacob Young

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Expertise

- 3D math
- Camera Calibration
- Machine Learning
- Deep Learning
- Image Processing
- Simultaneous Localization and Mapping (SLAM)

Programming Languages

- C#
- C++
- Python

Tools

- Docker
- Git
- Linux (Ubuntu)
- NumPy
- OpenCV
- OpenGL
- Pandas
- PyTorch
- ROS
- TensorFlow / Keras

Personal Skills

- Autodidact
- Creative Problem Solving
- Entrepreneurship
- Excellent Communication skills (Written and Verbal)
- Interpersonal Skills
- Leadership
- Research Skills

Acknowledgments

- Winner of the Digital Methods Initiative Summer School 2021 "Best Start-Up Concept" for tackling the spread of fake news
- Runner-up at DeepHack: Open BIM Hackathon
- Dean's Honor roll 2021/2022

Languages

- English - Native
- French - B2*

Experience

Basemark | Computer Vision Thesis Worker

January 2022 - August 2022 | Helsinki, Finland

- Thesis: *Real-Time Lane Detection on Embedded Systems for Control of Semi-Autonomous Vehicles*.
- Trained and tested multiple neural network based lane detection models with PyTorch on Linux in Docker. Developed a pipeline for automatically labeling data using *state of the art* networks to increase accuracy of real-time lightweight networks. Fused sensor information with network predictions using ROS, PyTorch and OpenCV to simulate vehicle movement.
- Python, PyTorch, C++, OpenCV, Linux, Docker, ROS

Interplay Learning | Software Engineer

July 2019 - January 2020 | (Remote) Austin, Texas - USA

- Created a virtual robot that tests virtual reality training simulations using data from recorded human interactions.
- C#, Unity 3D, Python, OpenGL, AWS, REST

Rooster Teeth Productions | Technical Artist

July 2018 - July 2019 | Austin, Texas - USA

- Automated workflow processes for artists using Python and managed a render farm of 200+ computers for the animated series RWBY and Gen:Lock
- Python, 3DS Max, Autodesk Maya, SideFX Houdini

Projects

Visual SLAM

- Implementing Harris Corners and SIFT from scratch in effort to gain deeper understanding of important concepts in vision based SLAM.
- Created using C++ (17), OpenCV and CMake on Ubuntu.
- <https://github.com/JacobYoung115/VisualSLAM>

WebVR Art Gallery

- jacobyoung.io/gallery

Education

EIT Digital double master's | Computer Vision

September 2020 - November 2022 | Paris, France / Helsinki, Finland

- Sorbonne Université
- Aalto University

University of Oklahoma | BFA in Art and Technology

August 2013 - May 2018 | Norman, Oklahoma - USA