Prakruti Catherine Gogia
Computer Vision & Deep Learning Engineer

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SUMMARY

I am interested in senior software engineer and tech lead roles within computer vision and deep learning and specifically in perception for robotics, AR/VR and self-driving. I am an expert in C++, SLAM and have experience managing a team to ship deep learning models in the cloud. I will be a great fit for roles that require both a high level of autonomy and collaboration, and require product thinking, deep technical domain expertise, rapid prototyping skills along with people management skills.

EDUCATION

MS Computer Vision | Robotics Institute, Carnegie Mellon University   GPA 3.89/4.0   2016-2017
Research Assistant to Prof. Michael Kaess in the Robot Perception Lab
Courses: Computer Graphics, Computer Vision, Visual Recognition and Learning

B.Tech & M.Tech in Electrical Engineering | IIT Madras   GPA 8.88/10.0   2011-2016
Minor: Systems Engineering 9.33/10 Digital Video Processing, Computational Photography

WORK EXPERIENCE

Software Engineer | Microsoft HoloLens   2018–Present
Worked on headtracking, large scale bundle adjustment and 3D reconstruction to ship HoloLens 2.
Worked on calibration, visual-inertial odometry systems, tracking LED constellations for new devices.
Set up a ground truth collection system using OptiTrack cameras for all teams across HoloLens and trained vendors in calibration and data collection for unseen and challenging locations.

Tech Lead and Co-founder | OrcaHello project [talk] [code] [project-page]   2019 - 2022
I lead a team of 20 hackers and 2 non-profit partners to build "OrcaHello" a whale call detection system that won the 2022 Microsoft Global Hackathon (Hack4Good track).
I built our data annotation pipeline, trained the model, and built our live inference pipeline on Microsoft Azure.
OrcaHello runs 24x7 detecting whale calls in the Puget Sound with open-sourced model, data and code.
Our project has been the recipient of over $30K in Azure credit grants and over $15K in non-profit grants.

Software Engineering Intern | Magic Leap   Summer 2017
Prototyped double-window bundle adjustment in the production pipeline and received a full-time offer.

Research Assistant and Teaching Assistant | CMU   2016-2017
Published the ICRA 2019 paper "Dense Surface Reconstruction from Monocular Vision and LiDAR"
TA for Undergraduate Computer Vision with Prof. Kris Kitani.

SKILLS

Programming Languages: (Advanced) C++, Python, (Basic) Javascript, SQL, C#
Frameworks: PyTorch, FastAI, Microsoft Azure, OpenCV, Ceres, ROS, Unity, Three.js
3D modeling in Blender, Fusion 360 and 3D printing for prototyping (Beginner)