Niveditha Kalavakonda

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LINKS

Github:// **nkalavak**
LinkedIn:// **niveditha-kalavakonda**
GoogleScholar(Publications):// **Niveditha Kalavakonda**

SOFTWARE

PROGRAMMING

Fluent:
Python • C# • MATLAB • C++ •
• C • LaTeX • Git
Familiar:
CUDA • Node.js • CSS • HTML •
Assembly • Java

FRAMEWORKS AND TOOLS

TensorFlow • PyTorch • Unity3D •
ROS • OpenGL • Maya3D
Blender • Gazebo • Photoshop

INTERESTS

- Robotics
- Computer Vision
- Virtual/Augmented Reality
- Haptics
- Sequence Modelling

EDUCATION

UNIVERSITY OF WASHINGTON - SEATTLE

PhD in Electrical and Computer Engineering
Expected June 2021 | Seattle, WA
GPA: 3.87/4.0

MS in Electrical Engineering
June 2017 | Seattle, WA

Dissertation:
Isosurface Visualization Using Augmented Reality for Improving Tumor Resection Outcomes
GPA: 3.84/4.0

AMRITA SCHOOL OF ENGINEERING

BTech in Electronics and Communication Engineering
May 2014 | Coimbatore, India

Dissertation:
Digitization of Linearized Thermistor Output Using Dual Slope Analog to Digital Converter
GPA: 8.31/10

EXPERIENCE

NVIDIA RESEARCH | Research Intern

New Experiences Group | June, 2018 - Sept, 2018| Durham, NC

- Developed a novel interface mechanism on augmented reality headsets by understanding spatial and temporal dependencies in human-object interaction (Project: Anything as a Controller)
- Devised design parameters for synthetic object pose estimation dataset generated using Unreal Engine and a custom plugin

BIOROBOTICS LAB | Graduate Research Assistant

University of Washington | March, 2017 - Present | Seattle, WA

- **Amazon Catalyst Fellow** ; Project: Intelligent Surgical Assistant
- Developed a custom U-net convolutional neural network architecture for surgical instrument segmentation and identification.
- Generated video and audio dataset for robot learning from human-human collaboration in Neurosurgical procedures.

BIOROBOTICS LAB | Graduate Research Student

University of Washington | Jan 2016 - June 2018 | Seattle, WA

- Demonstrated real-time tracking of multiple instruments for Skull Base Surgery using lighthouse tracking system from Valve
- Developed gesture recognition feature for users to interact with a display device containing DICOM images

HUMAN-ROBOT INFORMATICS LAB | Summer Student

Tohoku University | July 2016 – Aug 2016 | Sendai, Japan

- Designed and built a haptic module for real-time feedback during upper limb rehabilitation exercise
- Updated visual feedback in game developed with Unity3D Game Engine

ROBOTICS LAB | Project Associate

Indian Institute of Technology - Madras | June 2014 – Sept 2015 | Chennai, India

- Developed virtual-reality based simulator for teleoperation in surgical robots using Unity3D Game Engine and C#
- Programmed an interface between slave arm of custom surgical robot and Phantom Haptic Device using TCP/IP protocol

RECENT AWARDS

1st Place, ACM Student Research Competition, GHC2018	2018
Best Overall Graduate Poster, ACM Tapia 2018	2018
WTM Google Travel Grant, TensorFlow Developer Summit	2018
SWE Outstanding Female Engineer Award	2018

RELEVANT LEADERSHIP

Founding Chair , Women in Engineering - UW IEEE	2017-18
Lead Developer , Project SOLE, Kaiho Pasu, India	2016-18
Regional Student Rep. (1-7), IEEE - Robotics and Automation	2017-18
Robotics Workshop Leader , ChickTech, Seattle	2016-18