

# ABHIJAY GHILDYAL

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## EDUCATION

### Portland State University

Ph.D. in Computer Science (GPA: 3.92/4)

Advisor: Dr. Feng Liu. Research Area: Computer Vision

Sep 2019 – ongoing

### Washington State University, Pullman

Graduate Student in Computer Science (GPA: 3.95/4)

Aug 2018 – Aug 2019 (1 year)

### Savitribai Phule Pune University, India

Bachelor of Engineering in Information Technology (Grade: First class with a distinction)

Jun 2011 – Jun 2015 (4 years)

## PUBLICATIONS

Abhijay Ghildyal, Feng Liu, *Shift-tolerant Perceptual Similarity Metric*, In European Conference on Computer Vision (ECCV), 2022 ([Link](#)).

Qiqi Hou, Abhijay Ghildyal, Feng Liu, *A Perceptual Quality Metric for Video Frame Interpolation*, In European Conference on Computer Vision (ECCV), 2022 ([Link](#)).

## EXPERIENCE

### Data Scientist - Deep Learning Intern

Cambia Health Solutions, Portland, OR, USA - Team: *AI Office on Innovative Healthcare*

- Built models to predict future events in a patient's care path.

May 2019 – Jul 2019 (3 months)

### Graduate Research Assistant

Washington State University

- Center for Precision and Automated Agricultural Systems: Designed methods to autonomously navigate UAVs in Orchards.
- Intelligent Robot Learning Lab: Trained a Caregiver bot to follow humans using reinforcement learning.

Spring 2019

### Data Scientist

Quantela Inc., Bengaluru, India - *Smart City Solutions*

- Generating Urban Indicators like vegetation and built-up index using LANDSAT8 satellite imagery and GIS Python libraries.

Nov 2017 – Jul 2018 (10 months)

### Research Analyst (Data Science)

Mu Sigma Inc., Bengaluru, India - Team: *Innovation and Research Lab*

- Implemented a human detection algorithm to calculate the average customer wait time at checkout counters.
- Conducted time series analysis, for real-time intra-day algorithmic trading on the stock market (NYSE).
- Built forecasting models using ARIMA-GARCH, Reinforcement Learning, and Recurrence Plots (complex systems).
- Executed pairs trading strategy, using cointegration strengths for real-time analysis on NYSE using R, and Python.

Nov 2017 – Jul 2018 (2 years)

### Research Intern advised by Prof. Ganesh Ramakrishnan

Indian Institute of Technology (IIT), Bombay - Topic: *Setting up a social network in rural India*

- Developed and launched an Android App 'Lokavidya', in a team of two, that enabled the creation of spoken tutorial videos by farmers for sharing knowledge on innovative indigenous practices; we reduced tutorial video size by 10x full-length video.
- Developed an Interactive Voice Response System (IVRS) for ordering groceries from Abhinav Farmers Club.

Jun 2015 – Sep 2015 (6 months)

## RESEARCH INTERESTS & SKILLS

**Interests:** Computer vision, computational photography, deep learning, ML safety, adversarial robustness, and robotics.

**Skills:** Python/PyTorch/R/ShellScript/OpenCV/Scikit-learn/Scikit-image/Tensorflow/JavaScript/Excel/SQL/Docker (proficient), C/C++/Android/NodeJS/Java (working knowledge). Professional certifications: Mu Sigma Inc. - Decision Scientist.

## PROFESSIONAL SERVICE

**Reviewer:** ACMMM'22. **Volunteer:** Becoming I Foundation. **TA:** AI (F'19, W'20), ML (S'21), and Computer Graphics (F '21).

## REFERENCES

Dr. Feng Liu, Associate Professor, Department of Computer Science, Portland State University, Email: [fliu@cs.pdx.edu](mailto:fliu@cs.pdx.edu).