



Priyanka Chaudhary

PhD Student

+41 78 241 1868

priyanka-chaudhary.github.io/

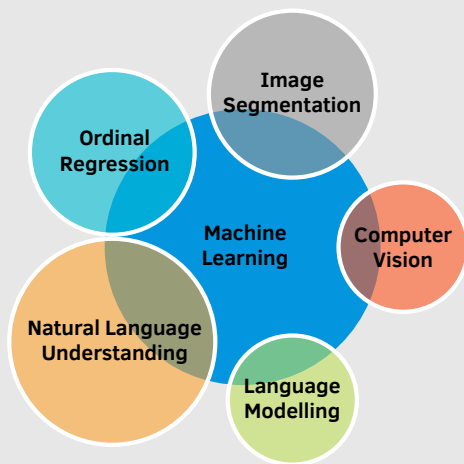
priyanka.chaudhary18@gmail.com

/in/pchaudha/

https://git-lab.ethz.ch/pchaudha

Technical Skills

Research Experience and Interests



Programming

Python • Tensorflow • Pytorch

C • C++ • Keras

OpenCV • MATLAB

Java • Javascript

Education

Nov 2018 - Present	PhD Student/ Scientific Assistant <i>Computer Vision and Machine Learning</i>	ETH Zürich
Oct 2015 - Sep 2018	MSc. Informatics <i>Degree completed - 1.5</i>	Technical University of Munich
Aug 2009 - May 2013	BTech. Software Engineering <i>Avg. - 75.48, First Division with Distinction</i>	Delhi Technological University

Research

Nov 2018 - Present	PhD Student <i>Flood water level estimation from social media images</i>	ETH Zürich
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Work till now includes:

- Implementation of rank based network for learning flood height.
- Extension of the work done in Master Thesis. The accepted paper in The ISPRS Annals of the Photogrammetry. [Link]
- Best Paper Award at ISPRS Geospatial Week 2019 in Semantic Scene Analysis and 3D Reconstruction from Images and Images Sequences track.
- **Tools:** Python, PyTorch, Keras, Matplotlib

Nov 2017 - Aug 2018	Master Thesis <i>Floodwater-estimation through semantic image interpretation</i>	Computer Vision Group, TUM, EcoVision Lab, ETHZ
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The focus of this thesis is to use images collected from social media of various flood events and use them to quantify the flood. In this thesis we use different objects of known dimensions partially submerged in flood water to predict floodwater-level. My contributions included:

- Design and implementation of annotation strategy to build models for floodwater-level prediction.
- Dataset collection, processing and annotation task. The processing of images details conversion to images to same format, detecting and removing duplicates from dataset, renaming all images for better handling.
- Implementation of pipeline to convert annotated images to JSON format for efficient storage and computation.
- Implementation of deep learning framework for Flood height prediction.
- **Tools:** Python, Keras, Tensorflow, Matplotlib

Apr 2017 - Sep 2017	Advanced Practical Course <i>Perception and Learning in Robotics and Augmented Reality</i>	CAMPAR Group@TUM
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In a team of two:

- Familiarising with practical aspects of 3D perception tasks such as feature extraction, surface matching, object localisation and pose estimation.
- Learned to build up an end-to-end framework for the goal of object detection and pose estimation on the challenge dataset.
- **Tools:** Python, TensorFlow, OpenCV, Point Cloud Library

Oct 2016 - Mar 2017	Interdisciplinary Project <i>Employee Branding Monitor</i>	Chair for Strategy and Organization@TUM
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- Development of a JavaEE based software solution for Employee Branding Monitor. The project aimed to provide companies with a view of outside world. The tasks accomplished during the project were: relevant data collection, query implementation and sentiment analysis.
- **Tools:** Python, Java, StanfordNLP, TextBlob



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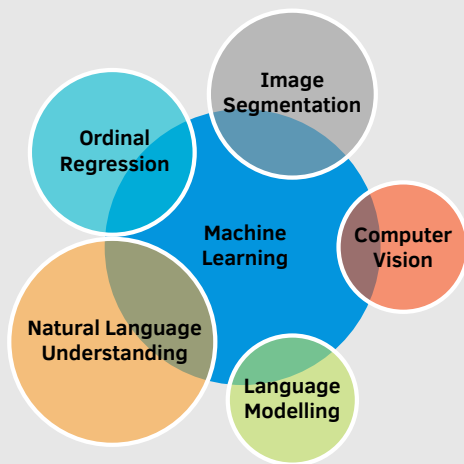
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Apr 2016 -
Sep 2016

Advanced Practical Course
Data Mining Lab

Chair of Bioinformatics@TUM

In a team of three:

- During the course, we went through the whole path of data mining from dataset preparation up to meaningful predictions.
- It included the following steps: dataset search and description, understanding the data and naive introspection, feature construction and selection and prediction and evaluation.
- **Tools:** Python, R

Feb 2019 -
Aug 2019

Lecture Project
Natural Language Understanding

Data Analytics Lab@ETH Zürich

In a team of two:

- Implementing a simple LSTM Language model to perform various experiments.
- Implementing a system that can solve the Story Cloze task using RACE dataset as an alternate training source.
- **Tools:** Python, Tensorflow

Experience

Apr 2016 -
Oct 2017

Working Student
Person Detection Project, Computer Vision R&D

Osram GmbH, Germany

- Research and development of cross platform GUI using WxPython.
- Translation of MATLAB code into C++.
- Research and creation of standalone executable for the project using PyInstaller.
- Helped in performance benchmarking of different prototypes.
- ECO tracker performance comparison with other trackers.

June 2013 -
Jun 2015

Software Development Engineer
Projects: Samsung Android Smartphones and Tabs on Android versions Jelly Bean, Jelly Bean Plus, Kitkat and Lollipop

Samsung R&D Institute Noida, India

- Enhancement and porting of File System (FAT, EXFAT, FUSE, SDCARDFS, EXT4) on Samsung mobile's proprietary platform.
- Development of file system API's (Read, Write, Mount, Unmount, Unlink, Copy, Seek etc.).
- Creation and updating of Partition Information table in mobile phones. Modification of memory map according to the memory requirements of the system.
- Code optimisation of file system operations for better performance while reading and writing of file.

Publication & Technical Reports

Jun 2019

Best paper award at the Semantics3D workshop of ISPRS Geospatial Week [↗](#)

Mar 2019

Accepted paper Flood-Water Level Estimation from Social Media Images [↗](#)

Aug 2018

Master Thesis: Floodwater-estimation through semantic image interpretation [↗](#)