Rajanie Prabha

Linkedin Github Twitter

Pittsburgh, PA 15213
412-313-3688
rajanie.prabha@gmail.com

EDUCATION

Swiss Federal Institute of Technology (ETH) Zurich, Switzerland — *Masters Thesis Research student (Exchange Program).*
MAY 2019 - NOVEMBER 2019
Lake Ice Monitoring of Alpine lakes using webcam images and crowdsourced data to analyze freezing and thawing periods for monitoring Climate Change.
Prof. Dr. Laura Leal-Taxie (TUM) and Prof. Dr. Konrad Schindler (ETH)
Grade: 1.3 [German scale(1.0 is best)]

Technical University of Munich, Munich, Germany — *Master of Science in Informatics*
OCTOBER 2017 - NOVEMBER 2019
Grade: 1.5 [German scale]

National Institute of Technology, Kurukshetra, India — *Bachelor of Technology in Computer Engineering*
JULY 2012 - JUNE 2016
Grade: 8.7/10
Best grades in all Mathematics courses (10/10).

PUBLICATIONS

"Ice Monitoring in Swiss Lakes from Optical Satellites and Webcams Using Machine Learning",
Manu Tom, **Rajanie Prabha**, Tianyu Wu, Emmanuel Baltsavias, Laura Leal-Taixe, Konrad Schindler
Remote Sensing MDPI, Journal Paper, October 2020

"Lake Ice Monitoring with Webcams and Crowd-Sourced Images",
Rajanie Prabha, Manu Tom, Mathias Rothermel, Emmanuel Baltsavias, Laura Leal-Taixe, Konrad Schindler
ISPRS Conference Paper, August 2020

EXPERIENCE

Pittsburgh Supercomputing Center, Carnegie Mellon University— *Machine Learning Research Scientist*
MARCH 2020 - Present

- Performed research activities (benchmarking and comparative evaluation of various existing and emerging AI hardware) at the intersection of HPC and AI for Open Compass, an exploratory research project to conduct academic pilot studies on an advanced engineering testbed. Benchmarked Maskrcnn and Single Stage Detection Model on Nvidia Pascal and Volta GPUs on the Bridges Supercomputer.
- Engaged deeply as an ECSS ML expert for a project "MLStamps" with the University of Pittsburgh, classifying historical Japanese manuscripts.
- Contributed to the Bridges Supercomputer by regularly updating and testing the Nvidia singularity containers and various DL datasets.
- Extensively (reviewed proposals, leading user-guide and providing Machine Learning assistance) involved with the Early User Program of Neocortex, the AI supercomputer, with teams from all over the United States working on DL projects.
- Presented tutorials on Nvidia profilers, singularity containers, Scaling best practices, and related research findings.

Institute of Computational Mechanics, TUM, Munich — *Research Assistant*
JAN 2019 - MAY 2019
Creation of Machine learning tools using CT-scans of patient's lungs to generate highly accurate reduced dimension digital twins of the human lungs.

Philips Innovation Center, Bangalore — *Software Engineer*
JUNE 2016 - JULY 2017
Worked on the Serviceability Platform for various medical devices to provide them with features like remote accessibility, log collection, monitoring rules, data sources, and regular expressions. Got Philips Recognition Certificate for handling major modalities like Computed tomography and Magnetic resonance imaging.

SKILLS

Python, Pytorch, Tensorflow, C/C++, Java.

LANGUAGES

English (Fluent), German (A1)

HACKATHONS

HackZurich 2019.
HackaTUM 2018.
Blockchain Hackathon by IBM Watson 2017.
HackaSuite, Philips 2017.

SCHOLARSHIPS

WiML NeurIPS 2020
Conference Grant.

Swiss European Mobility Program, 2019.
Master's thesis at ETH Zurich.

Funding from the Photogrammetry and Remote-Sensing Lab, ETH Zurich, 2019.
To facilitatethe ETH Exchange.

Inspire Scholarship by the Ministry of Science and Technology, Government of India, 2012. [Top 1 percentile]

VOLUNTEERING ACTIVITIES

Reviewer: **ML4PhyscialSciences NeurIPS Workshop 2019-2020.**

AnitaB.org AI Committee Member since July 2019
Working towards the empowerment of women in computing.

Technobyte, 2013-2016
Official CS society of NITKKR.

SHIKSHA, 2015
Taught high school subjects to underprivileged kids living on the outskirts of Kurukshetra, India. Organized online cryptic hunt for fundraising.

CMC Limited, Faridabad —*Project Trainee*
JUNE 2014 - AUGUST 2014
Online job portal (web) in Advanced Java using JSPs, Servlets, and Oracle database.

PROJECTS

WS18/19, Detection of Manipulated Videos, Prof. Dr. Matthias Niessner, Visual Computing Group, TUM
Explored 3D convolutional networks, Recurrent Neural Networks, and frame aggregation methods to detect fake videos in the wild. Achieved classification accuracy of 97% on the FaceForensics compressed dataset with 20k parameters model as compared to 4M parameters in the SOTA model with 98% accuracy.

WS18/19, Polyp Classification in Colonoscopy Videos, Dr. Shadi Albarqouni, Chair of Computer-Aided Medical Procedures, TUM
Classifying localized polyp frames into Hyperplastic(benign), Adenoma, or Serrated(malicious) using various deep learning architectures and autoencoders. Achieved ~80% SOTA accuracy on the healthy/malicious polyp task.

SS18, Luminovo.AI as a working student, Prof. Dr.-ing. Klaus Diepold, Chair of Data Processing, TUM
Implemented Tacotron 2 paper(Text-to-Speech Synthesis) on English LJ speech dataset and German Angela Merkel dataset (M-AILABS).

SS18, 'Adversarial examples in Deep learning, Prof. Dr. Stephan Guennemann, Chair of Data Mining and Analytics, TUM
Researched adversarial image space by analyzing Local Intrinsic Dimensionality and Bayesian Neural Networks on various image datasets like CIFAR, MNIST, etc.