

KAUSHIK S

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EDUCATION

IIITDM Kancheepuram Dual Degree (B.Tech+M.Tech) Computer Engineering <i>GPA: 8.83/10</i>	Chennai July 2014 - July 2019
Maharishi Vidya Mandir CBSE Grade 12 : 475/500 (100/100 in Mathematics)	Chennai April 2014

SELECTED PUBLICATIONS

- Balamurali Murugesan, Sricharan Vijayarangan, Kaushik Sarveswaran, Keerthi Ram, Mohanasankar Sivaprakasam. KD-MRI: A knowledge distillation framework for image reconstruction and image restoration in MRI workflow. Medical Imaging for Deep Learning (MIDL 2020). <https://2020.midl.io/papers/murugesan20.html>
- B. Murugesan, K. Sarveswaran, V. Raghavan S., S. M. Shankaranarayana, K. Ram and M. Sivaprakasam, "A Context Based Deep Learning Approach for Unbalanced Medical Image Segmentation," 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI), Iowa City, IA, USA, 2020, pp. 1949-1953, doi: 10.1109/ISBI45749.2020.9098597.
- Murugesan B., Vijaya Raghavan S., Sarveswaran K., Ram K., Sivaprakasam M. (2019) Recon-GLGAN: A Global-Local Context Based Generative Adversarial Network for MRI Reconstruction. In: Knoll F., Maier A., Rueckert D. (eds) Machine Learning for Medical Image Reconstruction. MLMIR 2019.
- Balamurali M*, Kaushik S*, SM Shankaranarayana, K Ram, M Sivaprakasam: Psi-Net: Shape and boundary aware joint multi-task deep network for medical image segmentation. In: 2019 IEEE 41st Engineering in Medicine and Biology Conference (EMBC 2019)
- Balamurali Murugesan, Sakthivel Selvaraj, Kaushik Sarveswaran, Keerthi Ram, Jayaraj Joseph, Mohanasankar Sivaprakasam, "Deep detection and classification of mitotic figures," Proc. SPIE 10956, Medical Imaging 2019: Digital Pathology, 109560T (18 March 2019)

EXPERIENCE

Comcast India Engineering Center <i>Engineer 3, Machine Learning</i> ML Engineer on the AIOps team. Applying LLMs to time series analysis for anomaly detection.	Chennai September 2024 - Present
École de technologie supérieure (ETS) <i>Research Intern</i> Conducting research on efficacy of semi-supervised learning approaches for Medical Image Segmentation.	Montreal (Remote) September 2022 - June 2023
PayPal <i>Software Engineer</i> Backend engineer on the OmniPayments team. Have worked on projects in payment network expansion and compliance domains, where major responsibilities included integrating new partners into the PayPal network across payment domains, complying with local regulations and ensure end-to-end seamless operation.	Chennai July 2019 - August 2022
Healthcare Technology Innovation Centre, IITM Research Park <i>Research Intern</i> • Was part of the Deep learning team in the Image Computing group. Conducted research in Medical Image Analysis, specifically in the domains of Image segmentation and reconstruction. Work resulted in several publications in leading Medical Imaging Conferences. • Applied state of the art deep learning architectures while participating in challenges in different imaging modalities - <i>Retinal Fundus Images</i> for Identification of Glaucoma, <i>Colonoscopy Videos</i> for polyp detection and <i>Histopathological Whole-slide Images of Cancer</i> for Mitotic Cell Detection, one of the strongest prognosticators for invasive breast carcinoma.	Chennai May 2018 - July 2019

- Worked at the Data Analytics and Intelligence Research (DAIR) Lab under Prof. Maya Ramnath on the proposal "Supporting instant search on graphs using keyword queries".
- Implemented an Interface which supports Auto completion of keywords while the user is typing and Dynamic results for the part of the query entered.

SKILLS AND AREAS OF INTEREST

Programming Languages:	C, C++, Python, MySQL, HTML, JS, PHP, Verilog HDL
Areas Of Interest:	Deep Learning, Software Development
Relevant Online Courses Undertaken :	Deep Learning Specialization - Andrew Ng Neural Networks for Machine Learning - Geoffrey Hinton
Relevant Frameworks/Libraries Used :	TensorFlow, PyTorch, Scipy, Skimage, Pandas, three.js

PROJECTS

C++

Implemented a graph container class and standard graph processing algorithms.

<https://github.com/project-prosper>

HTML, three.js

An Endless Runner type Video Game where the Player's Objective is to bypass obstacles and collect points.

<https://strangerwoods.herokuapp.com>

Design Project - Express

Worked on designing and pre-prototyping a smart pen which could write on most surfaces in an office scenario (in a group of 5).

<https://drive.google.com/drive/u/1/folders/1YYjdzek388EQbSg0Era0F34FfzBHKIxx>

ACHIEVEMENTS/OTHER ACTIVITIES

Deep Learning

- Presented papers at SPIE 2019, San Diego and MICCAI 2019, Shenzhen.
- Reviewer at Machine Learning for Health (ML4H) Symposium, 2021.
<https://ml4health.github.io/2021/>
- Reviewer at Machine Learning for Health (ML4H) Workshop, NeurIPS 2019.
<https://ml4health.github.io/2019/>
- Reviewer at ACM Conference on Health, Inference, and Learning (CHIL 2020)
<https://www.chilconference.org/>
- Placed 2nd in the Onsite Classification Task in the "Gastrointestinal Image ANALysis (GIANA)" sub-challenge, a part of the Endoscopic Vision Challenge (EndoVis) Challenge, MICCAI 2018.
<https://endovis.grand-challenge.org/>

Chess

- International Level Chess Player with a FIDE Elo Rating of 2126.
<http://ratings.fide.com/card.phtml?event=5036020>
- Represented PayPal in the 1st FIDE Online World Corporate Chess Championship. February 2021
<https://worldcorporate.fide.com/>
- Captain of the Chess Team which won Gold at the IIIT Inter Collegiate Sports Meet. December 2016

Teaching Assistant

Performed TA duties for the course Operating Systems (COM301/301P)

IIITDM Kancheepuram

July - November 2018