

# Vignesh Edithal

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## OBJECTIVE

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Looking for Machine Learning Engineer roles in Computer Vision and Data Science domain.  
Interested in contributing to AI and ML projects by leveraging programming and research skills.

## WORK EXPERIENCE

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**Advanced Micro Devices (AMD)** **May 2023 - December 2023 (expected)**  
**Machine Learning Research Intern** **Markham, Ontario**

- Finetuned CLIP and Auto Encoder models to highlight events in FPS gameplay with  $> 90\%$  accuracy
- Designed efficient data collection methodology to develop  $> 50$  GB in-house video dataset in a month
- Optimized state-of-the art transformer models for deployment using ONNX framework
- Wrote masters thesis and presented research poster in both academic and industry settings

**D. E. Shaw** **July 2018 - July 2022**  
**Senior Member Technical** **Hyderabad, India**

- Enabled firm-wide hierarchical permission management feature using Python and SQL backend
- Automated third party file transfers for HR using Python/Bash scripting leading to 10% ticket reduction
- Provided engineering support for production Linux cluster to SysAdmin team to reduce SRE escalations

## PROJECT WORK

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**Brain Tumor MRI synthesis using aggregation of GANs** **University of Toronto**

- Implemented and trained DCGAN and WGAN models from scratch with tuned hyper-parameters
- Pre-processed data using up/down-sampling and used style transfer for post processing
- Obtained PSNR and SSIM scores comparable to relevant literature
- Showcase research in poster presentation with industry/faculty and submitted conference format report

**Machine learning to predict college drop out rate** **IIT Madras, India**

- Exploratory data analysis followed by data cleaning and transformation using scaling pipelines
- Evaluation and Hyper-parameter tuning of 10 ML algorithms from scikit-learn library
- Identify best performing combination of algorithm and parameter set for the classification problem

## PUBLICATION

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**Novelty Goes Deep. A Deep Neural Solution To Document Level Novelty Detection.** (Ghosal, Edithal et. al., COLING 2018). ([aclanthology.org/C18-1237](https://aclanthology.org/C18-1237))

## EDUCATION

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**University of Toronto** **September 2022 - December 2023 (expected)**  
**MSc in Applied Computing:** Deep Learning, Computer Vision, Data Science **GPA: 4.0/4.0**

**IIT Madras** **December 2021 - August 2022**  
**Diploma in Data Science:** Statistics, Machine Learning, Business Analytics **GPA: 9.3/10**

**IIT Patna** **September 2014 - May 2018**  
**BTech in Computer Science:** Algorithms, Databases, Operating Systems **GPA: 8.9/10**

## TECHNICAL STRENGTHS

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<b>Scripting</b>	Bash, PowerShell, Python
<b>Deep learning</b>	Transformers, PyTorch, Keras, Hugging Face
<b>Computer Vision</b>	OpenCV, TorchVision, Decord, Scikit-image
<b>Data Science</b>	Pandas, Numpy, Matplotlib, Scikit-learn, SQL Alchemy