

Yash MEHTA

Research Engineer | Frank Hutter's AutoML Lab

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Hi! I'm currently a research engineer working on challenging neural architecture search research under the supervision of **Prof Frank Hutter** (ELLIS Fellow). Previously, I was a researcher at the Gatsby Computational Neuroscience Unit at UCL, where I was working on evaluating biologically plausible perturbation-based learning algorithms to train deep networks under the guidance of **Prof Peter Latham** (Gatsby) and **Tim Lillicrap** (DeepMind). In the past, I've also worked on deep learning-based personality detection from text with **Prof Erik Cambria** (NTU Singapore).

I thoroughly enjoy coding and working on hard algorithmic problems.

📁 RESEARCH EXPERIENCE

Present September 2020	Research Engineer, AUTOML LAB, University of Freiburg Fundamental and applied research on neural architecture search. <ul style="list-style-type: none">> Working on NAS applied to EEG data, One-Shot NAS methods and MSc. project supervision : NAS for panoptic segmentation.> Working on the development of <i>NASLib</i> - a modular, extensible and easy to use NAS library. Neural Architecture Search Computer Vision PyTorch
February 2020 January 2019	Research Staff, GATSBY COMPUTATIONAL NEUROSCIENCE UNIT, UCL Working on a joint project with DeepMind on the scalability of perturbation based biologically plausible learning algorithms for deep neural networks. <ul style="list-style-type: none">> We thoroughly investigate the node perturbation learning algorithm, especially how the algorithm scales to deep networks on modern datasets and architectures. Bio-plausible Learning Node Perturbation Neural Nets JAX
July 2018 January 2018	Research Assistant, NANYANG TECHNOLOGY UNIVERSITY, Singapore <ul style="list-style-type: none">> Published an extensive literature survey on deep learning-based automated personality detection.> Initiated and managed a collaboration with researchers at Stanford, Iran University to extend our work. NLP Language Models Deep Learning Personality Prediction Tensorflow

🎓 PUBLICATIONS

Erdos Number : [🔗](#) 3 [Yash Mehta – Erik Cambria – Giuseppe Melfi – Paul Erdos]

ON THE LIMITATIONS OF PERTURBATION BASED METHODS FOR TRAINING DEEP NETWORKS 2021 Yash Mehta, Naoki Hiratani, Peter Latham, Timothy P. Lillicrap In Preparation 🔗 Paper
BIOLOGICALLY PLAUSIBLE LOCALLY CONNECTED NETWORKS 2021 Roman Pogodin, Yash Mehta, Peter Latham, Timothy P. Lillicrap In Preparation 🔗 Paper
ONE-SHOT NEURAL ARCHITECTURE SEARCH BAKEOFF 2021 Yash Mehta*, Arber Zela*, Michael Reutche, Josif Grabocka, Frank Hutter In Preparation 🔗 Code
MULTI-TASK LEARNING FOR EMOTION AND PERSONALITY DETECTION 2021 Yang Li, Amir Kazameini, Yash Mehta, Erik Cambria Under Review Information Fusion (INFFUS) Impact Factor : 13.7 🔗 Paper
UP AND DOWN : MODELLING PERSONALITY WITH PSYCHOLINGUISTIC FEATURES AND LANGUAGE MODELS 2020 Yash Mehta*, Samin Fatehi*, Amir Kazameini, Clemens Stachl, Erik Cambria IEEE International Conference of Data Mining (ICDM) 🔗 Paper
PERSONALITY TRAIT DETECTION USING BAGGED SVM OVER BERT WORD EMBEDDING ENSEMBLES 2020 Amir Kazameini, Samin Fatehi, Yash Mehta, Sauleh Eetemadi, Erik Cambria ACL WiNLP Workshop 🔗 Paper

Yash Mehta, Navonil Majumder, Alexander Gelbukh, Erik Cambria

AI Review Journal Springer Nature Impact Factor : 5.747 50+ citations Paper

+ EDITORIAL BOARD MEMBERSHIPS

MANAGING GUEST EDITOR - SPECIAL ISSUE

[Future-Generation Personality Prediction from Digital Footprints](#)

FGCS Elsevier International Journal Impact Factor : 6.125

Brought together an expert editorial team and initiated a collaboration to create a special issue editorial in the Elsevier Future Generation Computer Systems (FGCS) international journal. The other guest editors in the team include **Prof Bjorn Schuller** (Imperial College), **Dr. Clemens Stachl** (Stanford), **Prof Joeseoph T Yun** (UIUC) and **Prof Konstantin Markov** (UoAizu).

📁 INDUSTRY EXPERIENCE

August 2019

June 2019

AI Theory Research Intern, NOAH'S ARK, Huawei R&D UK

- > Worked on neural architecture search (NAS) with a Bayesian Optimization Hyperband search strategy for extreme low light image denoising
- > Extensive literature review on neural architecture search to understand the recent methods
- > Came up with a novel way to combine NAS and compression strategies, which resulted in **8x** lower latency model and initiated a collaboration with the Huawei Moscow team

Neural Architecture Search Image Denoising Model Compression Tensorflow

December 2018

July 2018

Software Development Engineer, AMAZON, India

- > Worked on the lyrics re-architecture project in Prime Music on the AWS technology stack
- > Lead a team of 6 people in the Global Amazon ML Hackathon to create a scalable automated multimodal **song emotion detection** with word embeddings, deep neural networks and LSTMs won second prize
- > Quit this job to pursue academic research

AWS Datapipelines Development

July 2017

May 2017

Product Intern, INDUS VALLEY PARTNERS, India

- > Setup the ELK pipeline for convenient visualization of error logs, hands on experience with Hadoop, Apache Phoenix
- > This internship resulted in a pre-placement **job offer**

Elastic Search Hadoop Finance

🎓 EDUCATION

2014 - 2018

Bachelor of Engineering (Honors) in Computer Science*Birla Institute of Technology and Science*

- > Institute topper : Design and Analysis of Algorithms
- > Institute squash team captain, badminton team vice-captain
- > Relevant Coursework : Object Oriented Programming, Probability and Statistics, Data Structures and Algorithms, **Advanced Algorithms**

📖 TEACHING ASSISTANT

- > **CS F211** Data Structures and Algorithms (**head TA**)
- > **CS F364** Design and Analysis of Algorithms

+ INTERESTS

- > Backpack solo to the Himalayas, Australia and Europe
- > Timing for 21km - 1hr 46min

“ REFERENCES

Erik Cambria

Associate Professor, NTU SINGAPORE

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Timothy Lillicrap

Staff Research Scientist, DEEPMIND

@ tim.lily@google.com

Peter Latham

Full Professor, GATSBY, UCL

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