M Badri Narayanan

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Education

Sri Sivasubramaniya Nadar (SSN) College of Engineering (Autonomous), Affiliated to Anna University, Chennai, India — **Aug 2018 – May 2022**
B.Tech. Information Technology — **CGPA: 8.955 / 10.00**
Courses: Probability, Statistics, Discrete Mathematics, Data Structures, Algorithms, Operating Systems, Database Management Systems, Compiler Design, Machine Learning, Deep Learning, and Artificial Intelligence.
Roles: Head of the ML Division of PROCODE - official coding club of the Department of IT, Class representative for four years.

Vidya Mandir Senior Secondary School, Chennai, India — **Jun 2017 – Jun 2018**
Grade 12, Computer Science Group — **Grade: 94.4%**

Skills

Programming Languages: Python, C, C++
Frameworks and Tools: PyTorch, TensorFlow, Keras, Git, Docker, AWS
Libraries: NumPy, pandas, scikit-learn, NLTK, spaCy, OpenCV

Publications

Fake News Detection using a Deep Learning Transformer Based Encoder-Decoder architecture Code
M Badri Narayanan, *Arun Kumar Ramesh, K S Gayathri, A Shahina*
Submitted for review at Journal of Intelligent & Fuzzy Systems, 2022
Journal indexed in Science Citation Index Expanded.

End-to-End Speech Recognition of Tamil Language Paper Code
Mohamed Hashim Changrampadi, A Shahina, ***M Badri Narayanan****, A Nayeemulla Khan*
Intelligent Automation and Soft Computing, 2021
Journal indexed in Science Citation Index Expanded.

Sign Language Translation using Multi Context Transformer Paper Code
M Badri Narayanan*, K Mahesh Bharadwaj, G R Nithin, Dhiganth Rao Padamnoor, Vineeth Vijayaraghavan*
20^{th} *Mexican International Conference on Artificial Intelligence (MICAI), Mexico City, 2021*
Paper published in Springer Lecture Notes in Artificial Intelligence (LNAI).
Won the 3rd best paper award.

Experience

QUALCOMM, Associate Engineer - AI/ML, Hyderabad, India — **Jul 2022 – Present**
→ Working on the development and maintenance of the existing testing framework for SNPE (SnapDragon Neural Processing Engine).
→ Working to automate the development and testing pipelines for running state-of-the-art deep neural networks efficiently and accurately on SnapDragon chipsets.
Advisor: Mrs. Archana Patil, Engineer - Staff / Manager

Solarillion Foundation, UG RA and TA (Part Time), Chennai, India Website — **Feb 2020 – Present**
→ Working on Terms of Service Classification, an NLP problem statement that uses a two-stage knowledge distillation DL approach on low-resource devices with cutting-edge architectures like BERT to find unfair Terms of Service terms.
→ Lead the team which worked on Sign Language Translation which won the 3rd best paper award at the 20^{th} *Mexican International Conference on Artificial Intelligence (MICAI)*, Mexico City, 2021.
→ Evaluated assignments and projects, Guided many students in Python, ML, DL and research phase.
→ Lead the website development team and was part of the server management team.
→ Wrote bots for posting office hours and creating polls.
Advisor: Mr. Vineeth Vijayaraghavan, Director - Research and Outreach

Mad Street Den, Machine Learning Intern, Chennai, India — **Mar 2021 – Jun 2022**
→ Part of the NLP core group which developed a tool for document processing using an OCR engine, image processing, and NLP techniques to extract unstructured data and convert them to a structured format.

→ Built Computer Vision models to serve educational recommendations.
Advisor: Mr. Anand Chandrasekharan, Founder and CTO

Prodian Info Tech Pvt Ltd, Summer Intern, Chennai, India **Jun 2020 – Aug 2020**
→ Applied unsupervised ML Algorithms to explore different patterns that affect a cricket match.
Advisor: Mr. Vijay Karthik, Founder and CEO

Selected Projects

Freelance Projects **Freelancer Pofile** **Oct 2020 – Feb 2021**
Undertook projects from Freelancer.com in Natural Language Processing and Computer Vision. Completed a project with a US-based company "EasyComtec" to predict the ICD diagnosis code given a doctor report using Transformer architecture. I also developed a model to classify Arabic tweets into ham or spam.

Clickbait Classification **Code** **2020**
Classifying clickbaits: articles with potentially misleading titles, using a state-of-the-art NLP architecture.

Object Detection Using YOLO v3 **Code** **2020**
Detecting everyday objects using the YOLO v3 network with a custom dataset.

Machine Translator **Code** **2020**
English to French neural machine translator built using Transformer architecture in NLP.

Flight Delay Prediction **Code** **2020**
Two stage machine learning engine to predict arrival delay of flights in minutes.

Portfolio Website **Code** **2020**
Personal website created using HTML5,CSS3 and hosted using Github pages. Page currently live at https://mbadrinarayanan.github.io

Selected MOOC Courses

Natural Language Processing Specialization (Set of 4 Courses) Course Certificate **Oct 2020**
Coursera and DeepLearning.AI

Master Computer Vision™ OpenCV4 in Python with Deep Learning Course Certificate **Oct 2020**
Udemy

Training YOLO v3 for Objects Detection with Custom Data Course Certificate **July 2020**
Udemy

TensorFlow Developer Specialization (Set of 4 Courses) Course Certificate **Jun 2020**
Coursera and DeepLearning.AI

Deep Learning Specialization (Set of 5 Courses) Course Certificate **Jun 2020**
Coursera and DeepLearning.AI

Python for Computer Vision with OpenCV and Deep Learning Course Certificate **Jun 2020**
Udemy

Machine Learning Course Certificate **May 2020**
Coursera and Stanford University

Volunteering and Responsibilities

→ Conducted classes in NLP and CV, evaluated ML, DL assignments and projects as part of PROCODE.

→ Part of the tech team for SSN MUN 2021.

→ Volunteered with Chennai Volunteers to teach spoken English classes for socio-economically weaker students.

Awards and Honours

→ Received the **Merit Scholarship** for my academic performance in the 3rd year of my undergraduate study.

→ Won the **3rd best paper** award for "**Sign Language Translation using Multi Context Transformer**" at Mexican International Conference on Artificial Intelligence (MICAI), 2021.

→ Part of the collegiate cricket team which won the Manipal Academy for Higher Education (MAHE) cricket tournament.

→ Won the **2nd best project** for Computer Science in Grade 12.