ADITYA NATARAJAN

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EDUCATION

Columbia University	Master of Science, Computer Science		Dec 2019
College of Engineering,Guindy	Bachelor of Engineering, Computer Science	GPA: 8.98/10	May 2018

COURSE WORK

- Machine Learning
- Algorithms
- Artificial Intelligence
- Data Structures
- Probability & Queuing Theory
- Operating Systems

WORK EXPERIENCE

Undergraduate Researcher, College of Engineering, Guindy, Chennai, India — May - Aug 2017
Advisor: Dr. Ranjani Parthasarathi

- Implemented deep learning strategies for predicting iterative stencil computations
- Published at the *10th IEEE High Performance Computing Student Research Symposium*

Research Intern, Indian Institute of Science (IISc)**,** Bangalore, India — May - July 2016
Advisor: Dr. Ambedkar Dukkipati

- Worked on image depth map predictions using neural networks
- Architected machine learning classifiers for Computer Vision applications

PROJECTS

Video Editing Using Generative Adversarial Networks (*Python, TensorFlow)*

- Built a frame-by-frame video editing system using Deep Convolutional Generative Adversarial Networks
- Successfully implemented stylistic colorization and object substitution translations

Blind Guidance and Road Assistance System (*RaspberryPi, OpenCV, Python, JavaScript)*

- Designed a smart-cap wearable for visual assistance using Constrained Local Models for face tracking & emotion detection and text-to-speech modules for road sign identification
- *Awarded 2nd place in Microsoft's Code.Fun.Do hackathon*

Gesture Controlled RC Bot (*RaspberryPi, OpenCV, Python, Microsoft Azure)*

- Designed a fully functional gesture-controlled bot on Raspberry Pi
- Coded OpenCV modules implementing the Convex-Hull algorithm for hand gesture recognition
- Utilized Microsoft Cognitive Services Computer Vision API for OCR processing

Language Modeling using Recurrent Neural Networks *(Python, Keras, Android Studio, Flask)*

- Designed and trained LSTM Recurrent Networks to mimic and generate literary works of different authors
- Built a content-on-request mobile application to retrieve and present results

SKILLS

- **Programming Languages**: C, C++, Python, Java, PHP
- **Markup Languages**: HTML, LaTeX
- **Tools:** Git, Octave/MATLAB, MySQL

LEADERSHIP EXPERIENCE

- **Membership Chair**, Association for Computing Machinery (ACM) - Anna University — 2017 - 2018
- **Executive Editor**, The Guindy Times (College magazine) — 2017 - 2018
- **Director**, Quizzers Anonymous (College quiz club) — 2016 - 2017

AWARDS

- Eligible for the CBSE Inspire scholarship, for finishing in top 1% of 930,000 grade 12 students
- Awarded the CBSE Certificate of Merit, for finishing in top 0.1% of 1,300,000 grade 10 students
- Published in *The Deccan Herald* (Daily readership: 450,000)
- Won 15+ quizzes at college, inter-college and state level competitions