Adithya Raghu Ganesh

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Education

- **North Carolina State University** — Raleigh
  Master of Computer Science **GPA 3.5/4** — Aug. 2019 - Present
- **SSN College of Engineering, Anna University** — Chennai
  B Tech. Information Technology **CGPA 8.09/10** — May. 2019
- **Indian Statistical Institute** — Kolkata
  Summer School on Computer Vision, Graphics and Image Processing — May. 2017

Internship/Professional Experience

- **Computer Vision Team** — Sep. 2018 - Mar. 2019
  Iteron Group — Remotely for Switzerland
  - Built a fine grained hierarchical classifier for animal classification (Zoo Usecase). Classified different animals defined by upper hierarchy and also classified animals within homogeneous classes defined as lower hierarchy.
- **Platform Development Intern** — May. 2018 - Jul. 2018
  Imagin8ors Pte. Ltd. — Chennai
  - Coded various optimized Python algorithms to map different question types and answers. Other duties include audio stitching, code refactoring and research on Stanford Natural Language Processing. Designed a seq2seq model for a recommendation engine to automate challenges based on competency.

Research Experience

- **Guiding eyes for the blind** — Sep. 2019 - Present
  North Carolina State University — Raleigh
  - Modelling a network to determine the behaviour of dogs to different stimuli and observing its movements in an area.
- **Location, Detection and Navigation of an Unmanned Marine Vehicle** — Nov. 2017 - Jan. 2018
  Indian Institute of Technology Madras — Chennai
  - Modelled a prototype for an Indoor Positioning System. Found an alternative approach using clustering algorithms to determine vehicle's position from ultrasonic sensor data thereby improving system accuracy by 5%. Incorporated a real time object detection model for marine vehicle collision avoidance.
- **A Non-Invasive Approach for Prediction of Hemoglobin Value in Blood** — May. 2017 - Jul. 2017
  Indian Statistical Institute — Kolkata
  - Led a team generating a solution to integrate optical recognition of chromatic changes in a palm by extracting features from a video sequence using Time Series Analysis and Eulerian Magnification. Applied mathematical regression models to predict hemoglobin value with an 80.7% accuracy.

Publications

- **DICENet: Fine-Grained Recognition via Dilated Iterative Contextual Encoding** — Jul. 2019
  International Joint Conference on Neural Networks (IJCNN 2019) — Hungary

Projects

- **Algorithms**: Developed a heuristic search model to determine the moves to unscramble the Rubik's globe puzzle.
- **Keypoints detection**: Annotated images and used tensorflow libraries to detect leaf tips and collars in images.
- **Cloud Computing**: Devised an end-to-end cloud based e-commerce solution with a recommender engine. Presented this prototype in "14th International Conference on Distributed Computing and Internet Technology".
- **Machine Learning**: Ranked 1st in the hackathon conducted by Mahindra & Mahindra. Pre-processed the unstructured dataset given and developed a model that gave the best accuracy while testing on unknown test data.

Programming Skills

Languages: Python, SQL, Java, C++, C
Python libraries: TensorFlow, Keras, Pandas, OpenCV, Scrapy

Organizations & Activities

Student Volunteer: "Teach a School Program" - Taught Mathematics and English to underprivileged students