

BAVESH BALAJI

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Education

- **Indian Institute of Information Technology, Design and Manufacturing** Kancheepuram, India
Bachelor of Technology in Computer Science Jul 2018 - Present
 - Supervisor : [Dr Masilamani](#)
 - Cumulative GPA : 9.01/10
- **P.S Senior Secondary School** Chennai, India
Higher Secondary School Jul 2007 - May 2018
 - Higher Secondary Percentage : 94.2%

Work Experience

- **Quantrium Tech** Chennai, India
Computer Vision - Industrial Intern May 2021 - Present
 - Performed object detection on images from camera-trap using Microsoft's *MegaDetector*
 - Worked in Google Cloud Platform and built an *efficientnet-b5* based classifier to classify over 200 species from camera traps videos and increased the accuracy from 85% to 89%
 - Worked on tracking of fishes from highly occluded and low-frame rate videos.
 - Currently working on classification and segmentation of coral reefs from images.
 - Also working on Tensorflow Great Barrier Reef competition for detection of COTS.
- **Indian Institute of Technology** Roorkee, India
Computer Vision - Research Intern Nov 2021 - Present
 - Supervised by [Dr Partha Pratim Roy](#)
 - Working on object detection on aerial images using synthetic data
 - Using Virtual Reality and Computer Vision techniques to generate synthetic data and perform object detection on them.
 - Also simultaneously working on Facial Emotion recognition from images, videos and other signals such as EEG and ECG.

Skills and Interests



- **Languages:** Python, C, C++
- **Frameworks:** PyTorch, Matplotlib, Numpy, Scikit-Learn, Pandas
- **Interests:** Machine Learning, Computer Vision

Course work

- Data Structures and Algorithms
- Pattern Recognition
- Discrete Mathematics
- Advanced Data Structures and Algorithms
- Calculus
- Operating Systems
- Database Systems
- Linear Algebra

- Computational Engineering
- Deep Learning Specialization
- Design and Analysis of Algorithms
- Probability Theory
- Differential Equations
- Computer Architecture
- Human Computer Interaction

Projects

- **CoDoH: Classification of DNS over HTTPS** | Machine Learning, Network Security  Feb 2021
 - Used machine learning to build two statistical models, one for classifying network traffic as DoH vs non-DoH, and the other for classifying benign DoH vs Malicious DoH
- **Mask Detection** | Computer Vision, Deep Learning  May 2021
 - Implemented a detector that detects whether people are wearing masks or not.
 - Used YOLOv4 darknet for object detection and achieved an MAP of 83.86%

Extra Curricular

- Secured rank 222 in ACM-ICPC Gwalior Pune regionals and rank 342 in Amritapuri Regionals Jul 2021
- Secured ranks of 863 and 742 in Google Kickstart 2021 Mar 2021 - Nov 2021
- Qualified for round 1 and secured a rank of 2027 in Google CodeJam 2021 Mar 2021 - Jun 2021
- Expert in Codeforces, max rating of 1644.(top 4% in India) Nov 2019 - Apr 2021
- Max rating of 1383 in AtCoder(top 10% in India) Feb 2019
- 5-star in CodeChef, max rating of 2049.(top 10% in World) Feb 2019
- Won special mention in Start-up Weekend Hackathon conducted by CEG Guindy, Chennai Feb 2019
- Got selected as one of the top 80 ideas in EHIPASSIKO out of 200 teams, an intra-college Hackathon Nov 2019
- Won Second Place in CODERA conducted by SSN College of Engineering Sep 2021
- Qualified for round 2 in Codechef Snackdown'21 Sep 2021
- Mentoring college students on how to start competitive programming Aug 2021 - Present
- Member of school cricket team Jul 2013 - Apr 2018
- Have a trust that aims towards providing food, education and healthcare for the poor Sep 2021 - Present
- Was Part of the Disciplinary Committee of our university Jul 2018-Apr 2019