ANJITH GEORGE

CONTACT INFORMATION

Address: JCB Hall of Residence: C 201, IIT Kharagpur
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PROFILE

Six years of research experience in computer vision, machine learning and image processing. Have excellent academic record and demonstrated expertise in computer vision, machine learning and biometrics. Passionate to dive into the depths of engineering, to learn and apply new concepts in signal processing, machine learning and pattern recognition.

- **Computer Skills** : C, C++, Python, MATLAB, OpenCV, Unix/Linux/Windows, etc.

RESEARCH INTERESTS

Computer Vision, Pattern Recognition and Machine Learning, Human Computer Interaction, Gaze Tracking and applications,Signal Processing, Biometrics.

EDUCATION

Indian Institute of Technology (IIT) Kharagpur, India. PhD (Ongoing), Image based Gaze tracking and Activity Recognition, July 2012 — Current.

Indian Institute of Technology (IIT) Kharagpur, India. M. Tech, Instrumentation Engineering, July 2010 — June 2012

- CGPA: 9.17/10

N S S College of Engineering (University of Calicut), Kerala, India. B. Tech, Electrical and Electronics Engineering,October 2006 — June 2010

- Percentage: 80.26

St Mary's HSS Edoor, Kerala, India. 12th, June 2004 — May 2006

- Percentage: 94.16

St Mary's HSS Edoor, Kerala, India. 10th, June 2003 — March 2004

- Percentage: 89.0

RESEARCH PROFILE

PhD, IIT Kharagpur

- Design and implementation of a low cost eye gaze tracking system for low resolution images
- Development of a novel framework for biometric identification based on eye movements.
- Development of a framework for gaze based activity recognition.

M. Tech, IIT Kharagpur

- **Main Project**: Design and Implementation of Real-time Algorithms for Eye Tracking and PERCLOS Measurement for on board Estimation of Alertness of Drivers

B. Tech, University of Calicut

- PC controlled wireless security robot with video capture using PIC16F73.

SPONSORED PROJECTS

- **Algorithm Developer** : "Design of an Embedded System for On-board Assessment of the Level of Alertness in Human Driver", Funded by Department of Electronics and Information Technology (Ministry of Information Technology) Government of India, 2014.
- **Algorithm Developer** : "Fast Fixed Point Algorithms for identifying Alertness and Emotion", Funded by ***Samsung*** *Advanced Institute of Technology (**SAIT**) Under Global Research Outreach Program (GRO) 2012.*

AWARDS & HONOURS

- **Winner**, BioEye 2015, International Eye Movement based biometrics competition, Organized by IEEE BTAS.
- **Finalist**: Intel India Embedded Challenge 2012.
- **Secured 99.2 and 98.1 percentile** in Electrical engineering GATE 2010 and GATE 2012.
- **MHRD Fellowship** during PhD (2012-Current)
- **MHRD Fellowship** during M Tech (2010-2012)

JOURNAL PUBLICATIONS

- **A. George**, A. Routray, "Fast and Accurate Eye Localization Algorithm for Gaze Tracking in Low Resolution Images", (Accepted), *IET Computer Vision*, 2016.
- **A. George**, A. Routray, "A score level fusion method for eye movement biometrics", *Pattern Recognition Letters*, Elsevier, 2015.
- A. Dasgupta, **A. George**, S. L. Happy, A. Routray, "A Vision Based System for Monitoring the Loss of Attention in Automotive Drivers", in *IEEE Transactions on Intelligent Transportation Systems*, vol. 14, no. 4, pp.1825-1838, 2013
- A. Dasgupta, **A. George**, S. L. Happy, A. Routray, Tara Shanker, "An on-board vision based system for drowsiness detection in automotive drivers", in *International Journal of Advances in Engineering Sciences and Applied Mathematics, Springer, Special Issue on Advanced Traffic and Transportation Systems*, vol. 5, no. 2-3, pp. 94-103, 2013.

BOOK CHAPTERS

- A. Sengupta, **A. George**, A. Dasgupta, A. Chaudhuri, B. Kabi, A. Routray , "Alertness monitoring system for vehicle drivers using physiological signals". *Handbook of Research on Emerging Innovations in Rail Transportation Engineering (**Book Chapter**).* IGI Global, 2016.

CONFERENCE PUBLICATIONS

- **A. George**, A. Routray, "Real-time Eye Gaze Direction Classification Using Convolutional Neural Network", (Accepted), *SPCOM, International Conference on Signal Processing and Communications, IEEE*, 2016.
- A. Dasgupta, A. Mandloi, **A. George**, A. Routray, "An Improved Algorithm for Eye Corner Detection", (Accepted), *SPCOM, International Conference on Signal Processing and Communications, IEEE* , 2016.
- A. Morales, J. Fierrez, M. Gomez-Barrero, J. Ortega-Garcia, R. Daza, J.V. Monaco, J. Montalvo, J. Canuto, **A. George**, "KBOC: Keystroke Biometrics OnGoing Competition", (Accepted), IEEE Eighth International Conference on Biometrics: Theory, Applications, and Systems, BTAS 2016.
- G. Banik, P. Patnaik, **A. George**, A. Routray, "Contextual Priming and Perception Manipulation: An Exploration through Eye-Tracking and Audience Response", *NAOP Convention 2016, Allahabad.*
- SL Happy, A. Dasgupta, **A. George**, A. Routray, "A video database of human faces under near Infra-Red illumination for human computer interaction applications", *International Conference on Intelligent Human Computer Interaction (IHCI)*, IEEE, 2012.
- SL Happy, **A. George**, A. Routray, "A real time facial expression classification system using Local Binary Patterns", *International Conference on Intelligent Human Computer Interaction (IHCI)*, IEEE, 2012.

PATENTS

- "A SYSTEM FOR REAL-TIME ASSESSMENT OF ALERTNESS LEVEL OF HUMAN BEINGS", A. Routray, A. Dasgupta, **A. George**, SL Happy, *634/KOL/2013*, IN, 2013

ACTIVITIES

- Student member IEEE
- Member, Signal Processing Society and Computational Intelligence Society, IEEE
- Member, COGAIN

REVIEWER

- IEEE Transactions on Intelligent Transportation Systems.
- IET Computer Vision
- International Conference on Systems in Medicine and Biology (ICSMB 2016)

PERSONAL PROFILE

- **Permanent Address**: Thannikkappara House,
  Payam P. O.,
  Kolikkadavu via, Kannur,
  Kerala. PIN: 670704
- **Date of Birth**: 2nd May 1989
- **Nationality**: Indian
- **Marital Status** : Married
- **Passport Details**: Valid till 12.10.2025

Declaration

I hereby certify that the above mentioned particulars are correct up to the best of my knowledge and I bear the responsibility for the correctness of the above mentioned particulars.

(Anjith George)