Smith Joseph Christian

Arbutus, MD
smithjc17_pz6@indeedemail.com
+1 240 733 0275

Willing to relocate: Anywhere
Authorized to work in the US for any employer

Work Experience

Teaching Assistant

Ahmedabad University
January 2019 to December 2020

Subjects: Computer Organisation, Internet of Things, Advandance Data Structure, Computer Programming

- Conducted laboratory sessions for 4th, 6th and 8th semester students in the Engineering department
- Explained basic concepts for weekly experiments and assisted students through the different steps of experiments
- Graded all the pre-lab, post-lab and assignment every week before the next experiment
- Responsible for proctoring the examinations and viva throughout the semester

Research Trainee

Indian Space Research Organization
May 2018 to August 2018

Topic: Identifying the change of forest using L-Band SAR Data

- Created a stand-alone executable program which is currently used by a senior scientist in ISRO
- Developed an algorithm for the program in python which uses data from Landsat satellite over the years
- Showcased a working model of an algorithm which detects change in forest cover overtime
- Presented a thorough detailed version algorithm, which uses simple statistical tools to process the outcome

Assistant Fundraiser

YUVA Unstoppable NGO - India
January 2018 to May 2018

- Organised fundraising campaign and fun activities for specially- abled students of high school in rural area
- Prepared presentation and flyers for portraying the emotions and mental state of students at NGO
- Initiated workshops to display science projects, which was completed with the help of raised funds
- Managed data of incoming funds and updated records of every students in the NGO

Education

M.S. in Computer Engineering

University of Maryland, Baltimore County (UMBC) Ahmedabad University - Baltimore, MD

Present

Skills

- Programming Languages
- C/C++
- Java
- PHP
- Python
- HTML/CSS
- MATLAB
- VHDL
- Verilog Tools/Software
- Android Studio
- FPGA(Artix-7)
- Wireshark
- MySQL
- Latex
- Xilinx ISE
- Data Structures
- Linux
- PCB (3 years)
- Architecture & Engineering (4 years)

Links

http://www.linkedin.com/in/smith-christian-70a12a1b0

Publications

Facial Action Unit Recognition with Sparse Representation", International Journal of Futuristic Trends in Engineering , Volume V, Issue VI, May 2018

https://56c10ce5-e24e-4001-842c-de0555afad83.filesusr.com/ugd/69ce23_ccadaa0adab84667882ef09599db183a.pdf

May 2018

The paper presents a novel framework for recognition of facial action unit (AU) combinations by viewing the classification as a sparse representation problem. Based on this framework, we represent

a facial image exhibiting the combination of AUs as a sparse linear combination of basis constituting an overcomplete dictionary. We build an overcomplete dictionary whose main elements are mean Gabor features of AU combinations under examination. The other elements of the dictionary are randomly sampled from a distribution (e.g., Gaussian distribution) that guarantees sparse signal recovery. Afterwards, by solving L1-norm minimization, a facial image is represented as a sparse vector which is used to distinguish various AU patterns. After calculating the sparse representation, the classification problem is simply viewed as a rank maximal problem. The index of the maximal value of the sparse vector is regarded as the class label of the facial image under test. Extensive experiments on the Cohn-Kanade facial expressions database demonstrate that this sparse learning framework is promising for recognition of AU combinations.