

# TREVINE SHANE JUDE OORLOFF

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## EDUCATION

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### **Ph.D. in Electrical and Computer Engineering**

*Fall 2019 - Present*

*University of Maryland - College Park, MD*

- GPA: 3.91/4.0

### **B.Sc. in Electrical and Electronic Engineering (First Class Honors)**

*2014 - 2017*

*University of Peradeniya, Sri Lanka*

- GPA: 3.9/4.0
- Ranked 3<sup>rd</sup> in the Department of Electrical and Electronic Engineering

### **Advanced Diploma in Management Accounting**

*2012 - 2015*

*Chartered Institute of Management Accountants (CIMA), UK*

- CIMA Exams Qualified

## RESEARCH PUBLICATIONS

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- **Robust One-Shot Face Video Re-enactment using Hybrid Latent Spaces of StyleGAN2.** In *IEEE/CVF International Conference on Computer Vision (ICCV)* (2023): (Project Page)
- **Expressive Talking Head Video Encoding in StyleGAN2 Latent-Space.** In *ICCVW: AI for Creative Video Editing and Understanding* (2023) (Oral) (Best Paper Award): (Project Page)
- **Comparison of Two Algorithms for Land Cover Mapping Based on Hyperspectral Imagery.** In *International Journal on Advances in ICT for Emerging Regions*, 11:1, (2018)
- **Hyperspectral Imaging Based Land Cover Mapping Using Data Obtained by the Hyperion Sensor.** In *Intl. Conference on Advances in ICT for Emerging Regions*, (2017) (Best Paper Award)
- **Spectral-Spatial Hybrid Mechanism for Feature Detection Using Spectral Correlation.** In *IEEE International Conference on Industrial and Information Systems (ICIIS)*, (2017)
- **Land Cover Classification and Sub Component Analysis Using Hyperspectral Imagery.** In *IESL Transactions, Technical Papers, The Institute of Engineers, Sri Lanka*, (2017)
- **Geographical Feature Extraction Using Hyperspectral Images Obtained by the Hyperion Sensor.** In *International Symposium on Industrial Systems (INSYS)*, (2017)

## WORKING EXPERIENCE

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### **Research Scientist Intern (Vision/Audio)**

*May 2023 - Present*

*Reality Defender Inc., New York, USA*

- Working on a research project on video deep fake detection

### **Applications Engineer**

*Nov. 2017 - Jul. 2019*

*Synopsys Inc., Sri Lanka*

- Functioned as the **Technical Lead** of the ZeBu Product Validation team

- Gained experience in validating and emulation based debugging using EDA tools such as ZeBu, VCS, Verdi, DC, SpyGlass, zFmCheck, and PTPX

### Research Engineering Intern (Electronics and Prototyping)

Oct. 2016 - Dec. 2016

Cyruap (Pvt) Limited, Sri Lanka

- Was actively involved in four projects which included design and fabrication of two prototypes, and submitting of three project proposals for future IoT product research

## HONORS AND AWARDS

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- **2023: Best Paper Award** at the CVEU2023 Workshop at ICCV'23, for the paper, *Expressive Talking Head Video Encoding in StyleGAN2 Latent-Space*
- **2019:** Received two **Above and Beyond Awards** at Synopsys Inc., Sri Lanka for the contributions in validation of ZeBu Power Estimation and ZeBu Front-End projects.
- **2017: Best Paper Award** at the International Conference of Advances in ICT for Emerging Regions, for the paper, *Hyperspectral Imaging Based Land Cover Mapping Using Data Obtained by the Hyperion Sensor*
- **2017/2018, 2016/2017: Nominee for the Eng. E.W. Karunarathne Award**, which is awarded for the Best Undergraduate Project in Electrical Engineering (Nation-wide), for the research project "Hyperspectral Image Analysis for Feature Detection"
- **2013: High Distinction Award** at the Sri Lankan Mathematical Olympiad 2013, organized by the Sri Lanka Olympiad Mathematics Foundation
- **2011: Bronze Medalist** at the Sri Lankan Physics Olympiad Competition - 2011, organized by the Institute of Physics, Sri Lanka
- **2010 & 2007: Best Student Award** at Trinity College, Kandy awarded for the best academic performance

## SERVICES

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- **Peer Reviewer** at the IEEE International Conference on Information and Automation for Sustainability 2021 (IEEE ICIAfS 2021)
- **External Examiner** for final-year undergraduate project evaluations of the Sri Lanka Technological Campus (SLTC), Sri Lanka (2021,2022)

## COURSES

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- **Artificial Intelligence:** Advanced Techniques in Visual Learning and Recognition, Algorithms in Machine Learning: Guarantees and Analyses, Statistical Pattern Recognition, Learning and Statistical Signal Processing
- **Signal Processing:** Random Processes in Communication and Control, Advanced Digital Signal Processing, Advanced Numerical Optimization, Information Theory
- **Other:** Compilers and Optimization

## SKILLS

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- **Languages:** Python, C, MATLAB, Verilog, System Verilog
- **Frameworks:** PyTorch, Tensorflow
- **Experience & Interests:** Computer Vision, Machine Learning, Signal Processing