Justin Johnson Saluja

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Education

Carnegie Mellon University	*Pittsburgh, PA*
M.S. Electrical and Computer Engineering	*August 2020*

University of Florida	*Gainesville, FL*
B.S. Electrical Engineering - *summa cum laude*	*2013-2018*
Minors: Physics and Mathematics	

Relevant Coursework

Computational Methods: Machine Learning, Complex Analysis, Fourier Analysis, Signals & Systems

Physics: Electrodynamics I/II, Quantum Mechanics, Introduction to Nano-devices

Engineering Systems: Real Time DSP Applications, Microprocessor Applications, Antenna Systems, Communication Systems and Components, Radar

Skills

Programming Python, C/C++, Bash, Matlab
Design Altium Designer, HFSS, Solidworks
iOS App Development Xcode, Swift/Obj-C
Markup LaTeX, HTML, CSS
Software Development Git (& Gitlab, Github, Atlassian), CI/CD

Work Experience

Institute for Defense Analyses	*Alexandira, VA*
Research Associate	*April, 2019 - Present*

- Derived a hybrid cartesian-spherical tracking algorithm for fast moving aerial targets by Frequency Modulated Continuous Wave (FMCW) radar
- Established substantial accuracy improvement compared to previous benchmark studies found in practical 3D target tracking through Monte Carlo simulations
- Produced 3D animations and GUIs for real time error analysis and visual inspection

US Naval Research Laboratory	*Washington, D.C.*
Student Intern	*August, 2018 - April 2019*

Publications

A Supervised Machine Learning Algorithm for Heart-rate Detection Using Doppler Motion-Sensing Radar J.J. Saluja, J. Casanova, and J. Lin *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology (J-ERM)* Article8741050

A Supervised Learning Approach for Real Time Vital Sign Radar Harmonics Cancellation J.J. Saluja, J. Casanova, and J. Lin *IEEE International Microwave Biomedical Conference (IMBioC), 2018*