SIDDARTHA DEVIC

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EDUCATION

The University of Texas at Dallas *August 2017 - May 2021*
B.S. Pure Mathematics, Computer Science (Double Major) GPA: 3.96/4.0
CS^2 Honors Program, Collegium V Interdisciplinary Honors Program

TECHNICAL SKILLS

Machine Learning Python, Tensorflow, Keras, OpenCV
Programming & Software Java, C++, Linux, C#, C, vim, git, LaTeX, Unity3D, QT, MIPS

WORK & RESEARCH EXPERIENCE

Johns Hopkins Applied Physics Labs *Summer 2019*
Research Intern

AI and machine learning research with the Machine Perception group. Secret Clearance (2029) for classified projects dealing with object detection. Unclassified research project investigating active learning with "Accurate Layerwise Interpretable Confidence Estimation" (ALICE).

Markov Lab *October 2017 - Present*
Student Researcher, UT Dallas

Convex optimization and neural networks in the field of machine learning. Convex function fitting with applications in reinforcement learning [poster]. Previous work investigated margins in neural networks for improved generalization [blog][poster]. Investigations mentored by Prof. Nicholas Ruozzi.

Advanced Network Research Lab *April 2018 - Present*
Student Researcher, UT Dallas

Developing Resilient Distributed Neural Networks using novel training techniques [poster]. Agent-based recovery for network graphs using reinforcement learning [preprint]. Mentored by Prof. Jason Jue.

Future Immersive Virtual Environments Lab *Summer 2017*
Student Researcher, UT Dallas

Novel method for physical object selection and representation in virtual reality [poster]. Prototyped in Unity3D for the HTC VIVE headset. Part of Clark summer research program for pre-freshman.

PUBLICATIONS & MANUSCRIPTS

DeepPR: Incremental Recovery for Interdependent VNFs with Deep Reinforcement Learning. Genya Ishigaki, **Siddartha Devic**, Riti Gour, Jason P. Jue. *To appear at IEEE GLOBECOM 2019.*

POSTERS & TALKS

Failure-Resilient Distributed Deep Learning Inference *(Poster, Future Networks Summit 2019)*

Convex Functions for Reinforcement Learning *(Poster, Undergraduate Research Contest, 2019)*

Robust Optimization with Applications in Networking *(Slides, UTD Graduate Seminar, 2019)*

A Reinforcement Learning based Approach to Networking *(Slides, UTD Graduate Seminar, 2019)*

Improving Generalization in Neural Networks Through Margin Maximization *(Poster, UTD, 2018)*

Digitally Representing Physical Objects for Collision Avoidance in VR *(Poster, Clark Program, 2017)*

ACADEMIC ACHIEVEMENTS

Undergraduate Research Scholar Award	*2018 - 2019*
Intel Innovate FPGA Semi-finalist. Top 20 team in the Americas region [writeup].	*2018*
School of Engineering Dean's List (Top 10%)	*3 of 4 Semesters*
UTD Academic Excellence Scholarship (Honors level)	*2017 - 2021*
Clark Summer Research Program (Participant & Advisor)	*2017, 2018*

STUDENT ACTIVITIES

ACM UTD Chapter Vice-President Lead the largest CS organization at UTD (1000+ Members). Organize a 35 person team that coordinates student-based semester long technical projects, mentorship programs, a 650+ person hackathon, funding for student startups, and industry talks. 8-10 hours/week.

Empower Through Code Organize and attend weekly STEM workshops for at-risk middle school girls in low income areas, exposing them to engineering and developing critical thinking. 2-3 hours/week.

RELEVANT COURSES

(Graduate) Algorithms, Data Structures, Machine Learning, Operating Systems, Computer Architecture, Differential Equations, Differential Geometry, Abstract Algebra I, Real Analysis I

SELECTED TECHNICAL PROJECTS

RuTroll, HackHarvard 2018 Developed chrome extension to highlight tweets likely to come from a Russian propoganda bot. Natural language processing classifier based on the 538 dataset [github].

Green Raccoon, EarthxHack 2018 Educational react-native application which takes pictures of objects and determines if they are recyclable or not based on semantic heuristics [blog].