NAREN S. DASAN:
I am computer engineer with 7 years of experience in developing robotics, machine learning, embedded and web systems. I graduated from the University of Illinois at Urbana-Champaign for **BS in Computer Engineering**, in May 2018. My software and work portfolio is at http://narendasan.com

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WORK EXPERIENCE

AUTOMOTIVE SOLUTION ARCHITECT - NVIDIA CORP. - SANTA CLARA, CA - JULY 2018 - PRESENT

- Solution Architect in the NVIDIA Automotive group working on applications of Deep Learning for Autonomous Vehicles.
- Worked on tackling issues ranging from heterogenous computing, object detection, behavior modeling, efficient NNs and compilers
- Developed multiple open source projects for deep learning on NVIDIA platforms (DRIVE AGX, NVIDIA GPUs) TRTorch, DL4AGX

AUTOMOTIVE SOLUTION ARCHITECT INTERN - NVIDIA CORP. - SANTA CLARA, CA - JANUARY - AUGUST 2017

- Solution Architect Intern for the NVIDIA Automotive group with a focus on self driving car technology.
- Implemented products and features directly impacting NVIDIA's automotive customers looking to develop self driving car capabilities.
- Major contributions to the TensorRT NN Optimizer, original author of the Python API for TenorRT and improved usability for dev/deploy.

SOFTWARE ENGINEERING INTERN — NEST LABS INC. - BOULDER, CO — MAY - AUGUST 2016

- Developed embedded software for the next generation Works With Nest Platform, featuring work on Thread and Nest Weave.
- Completed platform, working on hardware and demonstrated hardware implementation at Nest HQ in California
- Helped develop custom DSL for creating Weave devices, work was open sourced as part of the OpenWeave project

RESEARCH ASSISTANT, VISION GROUP, UNIVERSITY OF ILLINOIS @ URBANA - FEB 2015 - MAY 2018

- Worked with Professor Derek Hoiem on visual scene understanding and object reconstruction.
- Using LSD-SLAM, SFM tools and in-house developed image processing techniques in C++ and MATLAB to understand scenes.
- Techniques can be used in object reconstruction, motion planning and robotics. http://dhoiem.cs.illinois.edu/

SOFTWARE ENGINEERING INTERN - ORACLE CORP. REDWOOD CITY, CA — MAY - AUGUST 2015

- Developed UI and front-end features for Oracle's new Support Portal - web platform for all Oracle's support, multibillion dollar business
- Conducted user studies, custom developed UI kits and prototyped a replacement for this legacy system used by 20+K employees.
- Conducted Heuristic Evaluations to come up with a new design for - http://support.oracle.com

SOFTWARE ENGINEERING INTERN- SOLIDFIRE INC. BOULDER, CO — MAY - AUGUST 2014

- Developed software for optimizing large binary transfers between cloud compute clusters.
- Created a new parallelized delta compression tool designed specifically for the DWARF debugging format on Linux.
- Currently deployed in SolidFire Inc. for debugging operating systems on remote test benches - http://solidfire.com/

RESEARCH STUDENT, CORRELL LAB FOR SWARM ROBOTICS, UNIVERSITY OF COLORADO — MAY 2013 - 2014

- Developed a novel user interface for use in a distributed computing system of self-organizing wall components.
- Developed embedded C++ and C code, designed hardware components in Eagle and used SolidWorks software for 3D design.
- Designed distributed algorithms to provide components with relative location and emergent sensor functionality and UI.

PROJECTS AND PUBLICATIONS

TWILIGHT: RECONFIGURABLE SELF ORGANIZING OFFICE LIGHTING - MAY 2018

- Developed a swarm based lighting system which self organizes to build an intelligent lighting system
- Nodes in the system localize and communicate to run app that control lighting temperature, visualization and other smart office functions
- Senior Thesis for BS in Computer Engineering - University of Illinois Urbana-Champaign

3DFS: DEFORMABLE DENSE DEPTH FUSION AND SEGMENTATION .... - JULY 2016

- Technical report presenting an approach to do 3D reconstruction and segmentation of a single object from handheld video
- Contributed work using LSD-SLAM, PMVS and Poisson Reconstruction to demonstrate past state of the art
- Worked on LSD-SLAM -> PMVS space point cloud generation to feed into the 3DFS pipeline

GESTURE BASED DISTRIBUTED UI FOR A RECONFIGURABLE SELF-ORGANIZING SMART WALL - FEB. 2014

- Describes user interactions with the self-organized amorphous wall using swarm robotics techniques.
- A modular, fully distributed/decentralized system of smart building blocks that communicate locally for creating smart surfaces.
- Published in ACM Conference on Tangible Embedded and Embodied Interactions 2014, Munich Germany - ACM digital library.

EDUCATION

University of Illinois, Urbana-Champaign, BS in Computer Engineering May 2018

Focusing on Robotics, Computer Vision, Machine Learning, Distributed/Embedded/Operating Systems

SKILLS

- ML Model Development and Deployment using PyTorch, Tensorflow and TensorRT (Python/C++)
- Distributed, Parallel and Embedded programming using C and C++ on ARM, Intel and Microcontrollers to build realtime systems
- Developed a linux clone, with scheduling, threads, locking, paging, memory management, display and peripheral drivers. (C/C++/Rust)
- Developed web apps with AngularJS, Node.js, Rails, net/http. Programmed API and backend in Go, Python and Ruby
- C, C++, Rust, Python programmer with ability optimize programs via elegant use of data structures and algorithms