NAREN S. DASAN

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I am software developer with 5 years of experience in developing front-end applications, data analytics, user interface design, Robotics and Embedded Computer Systems. I am attending the University of Illinois at Urbana-Champaign for **BS in Computer Engineering**, graduating in **May 2017**. My software and work portfolio is at - http://narendasan.com/portfolio/

EDUCATION

University of Illinois at Urbana-Champaign, BS in Computer Engineering (Expected to graduate in May 2017)

Operating Systems	Real Time Systems	User Experience and Interface
Data Structures	Embedded Systems	Computer Architecture
Discrete Structures/Algorithms	Computer Vision	Distributed Computing

SKILLS

- C++, Java, C programmer with ability optimize programs via elegant use of data structures and algorithms
- Distributed, Parallel and Embedded programming using C and C++ including use of Intel / x86 assembly to build realtime systems
- Developed a linux variant, including, scheduling, threads, locking, paging, memory management, display and peripheral drivers.
- Developed web apps with Javascript, AngularJS, Node.js, Rails, net/http. Programmed API and backend in Go, Python and Ruby
- Discrete math, number theory and analytical skills to optimize and scale algorithms Prime Numbers in digits of 'e'
- System administration and network management using ssh, firewalls, AppleScript on Mac OS X, Linux and Windows

WORK EXPERIENCE

RESEARCH ASSISTANT, COMPUTER VISION LAB, UNIVERSITY OF ILLINOIS @ URBANA - FEB 2015 - PRESENT

- Working with Professor Derek Hoiem on visual scene understanding and object reconstruction.
- Using LSD-SLAM and OpenCV technologies and developed image processing techniques in C++ and MATLAB to understand scenes.
- Techniques can be used in motion planning, visual search 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, written in C++.
- Created a new delta parallelized 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.

DATA ANALYST, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, BOULDER, CO — MAY 2012 - 2013

- Worked with NOAA ESRL scientists to develop an efficient algorithm to analyze global lightning data in real-time climate models.
- Developed parellelizable software to efficiently use high performance computing systems (Zeus Super Computer).
- NOAA integrated my algorithm directly into their production climate models. In daily use by NOAA scientists - http://ruc.noaa.gov/amb/

PROJECTS

TACOS - SINGLE CORE LINUX VARIANT - FALL 2015

- Developed a Linux Kernel from scratch for the Intel x86 Architecture.
- Allows for multiprocess operation and full user support, display, keyboard via device drivers.
- Support for modified ELF programs, with paged memory and a full scheduler, TacOS Codebase available on Github.

GREYLOCK HACKFEST 2015: EKKO - NEAR INSTANTANEOUS SHARING - SUMMER 2015

- In 24 hours built a Cocoa (OS X) Application in Swift with a Firebase backend to facilitate elegant and easy to use website sharing.
- Ekko allows uses to share documents and web links. Users share using a simple gesture.
- Won the top 10 hacks at Greylock Hackfest 2015 in Burlingame, CA. Code for Ekko is publically available on Github.

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 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.

TEDTALK: THE FUTURE OF LEARNING IN A INTERDISCIPLINARY WORLD - APRIL 2014

- Presented a public talk on the future of learning, based on my experience in interdisciplinary fields.
- How the ideas of design thinking can be used to quickly come up with new solutions.
- How interesting ideas can emerge from diverse fields.
- Derived from my experiences in Swarm Robotics, Application Development, and Climate Modeling. TEDTalk video on youtube.