

# Dhruv Vemula

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## Summary

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Software Engineer at Cisco with six years of experience developing web and desktop applications.

## Experience

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### Software Engineer – Cisco Systems, San Jose, CA

Jul 2010 – Present

Built the Cisco [Nexus 1000V Installer for Windows Server](#) 2012 (Hyper-V) from scratch in two months – with minimal help and frequent changes in requirements. Nexus 1000V is a distributed virtual software switch by Cisco that provides state-of-the-art switching for virtual machines.

(Worked with .NET 4.5, C#, WPF, Microsoft SCVMM 2012 API, Nexus 1000V REST API)

*\*Ongoing project*

Rewrote the [Nexus 1000V Installer for VMware vSphere](#) (ESXi) codebase in six months to scale to 64 hosts (from 2) and run 2x faster. Developed 10+ new features. (Worked with Java, VMware vSphere API, Swing, XML, Ant)

Out of grad school, built **Easy VM-FEX** (a tool to deploy Cisco VM-FEX on VMware vSphere) from the ground up (with a co-worker). Designed the UI/UX, wrote a Java wrapper for Cisco UCSM XML APIs, worked on testing, deploying, distributing and open-sourcing the tool.

(Used Java, Cisco UCSM XML API, VMware vSphere API, Swing, XML, Ant, JUnit, Jenkins)

### Software Engineering Intern – Cisco Systems, San Jose, CA

Jun 2009 – Aug 2009

Developed fully functional prototypes of **mobile clients for Blackberry** phones and the [Cisco 7975 IP Phone](#) in three months - without prior development experience on the devices, as a part of Cisco IPICS (a platform that bridges radio, IP and cellular networks during emergencies). (Worked with Java ME, CLDC/MIDP APIs, Blackberry SDK, XML, IPICS API, Adobe Photoshop)

### Research Assistant – Multimedia Networks Lab, UMass, Amherst, MA

Sep 2008 – May 2009

Was the student researcher and developer of **DIORAMA**, a web-based system to handle victims in disaster scenarios. DIORAMA uses Active RFID trilateration to estimate victim locations in real-time, presents them to rescue personnel on a map to help them act. Authored a paper titled 'Real time localization of victims at an emergency site' presented at IEEE EMBC '09 based on the work (see Publications section).

(Used ASP.NET 3.5, C#, SQL Server 2008, Google Maps API, JavaScript, Java, Python and SQLite)

### Software Engineer – Accenture India Delivery Center, Bangalore, India

Jul 2006 – Jun 2008

Implemented the framework of **RADAR** (an attendance, leave and communication management application used by Accenture BPO employees worldwide) using the MVP pattern. Also designed the UI, developed mailing, several core components and modules.

Developed the test engine of **Skills Examiner**, an online test taking application (analogous to TOEFL; used by Accenture training teams worldwide and also sold as a product to organizations) to support 5000 concurrent users.

As an intern (Jan 2006 – Jun 2006), built several modules of Skills Examiner end-to-end (UI, application code, SQL). Gained exposure to software development, object oriented application design and programming, client-server architecture, the .NET framework, databases and web technologies.

(Worked with ASP.NET 2.0, C# 2.0, SQL Server, ASP.NET AJAX, JavaScript, XML, NUnit, IIS for the projects)

### Student – UMass Amherst

Sep 2008 – May 2010

- Built **webio** (web + bio), a web app that calculates your "Vulnerability Score", based on how much of your personal information (Full Name, Address, Phone number etc.) is out there on the web. (as part of an assignment for the course Security Engineering)
- Built **Facebook Filter**, a web app that lets you mute out stories with specific keywords from your News Feed.

### Student – Birla Institute of Technology and Science, Pilani, India

Aug 2002 – Dec 2005

- Implemented matrix multiplication in Verilog HDL and mapped the code onto an FPGA as a part of motion optimization for a robot
- Built a drug inventory system for the Pharmacy department of CARE Hospitals, Hyderabad, India (as an intern)

## Other Projects

- Designed and developed the first version of the website of [www.nirmaan.org](http://www.nirmaan.org) (a non-profit started by my friends) in three months. Built features - a blog, member database, member search, payment gateway etc. (in 2007)
- Built [Copy Link Address](#), a Chrome extension that lets you copy a link on a web page with a keyboard shortcut. It currently has 1500+ users.
- Developed [twitter2tumblr](#), a python script that backs up your tweets to your tumblr blog.
- Building an online version of the multiplayer card game Literature in using Firebase and Angular.js.

## Publications

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### Real Time Localization of Victims at an Emergency Site: Architecture, Algorithms and Experimentation

Vemula, D.T.; Xunyi Yu; Ganz, A.; ECE Dept., Univ. of Massachusetts, Amherst, MA, USA

Presented at the Annual International Conference of the IEEE - Engineering in Medicine and Biology Society (EMBC), 2009.

[\(Link\)](#)

## Education

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### University of Massachusetts, Amherst, MA

M.S. Electrical and Computer Engineering

Sep 2008 – May 2010

GPA 3.65 / 4.0

### Birla Institute of Technology and Science (BITS), Pilani, India

B.E. (Hons.) Electrical and Electronics Engineering

Aug 2002 – Jun 2006

GPA 7.9 / 10

### S.R. Navavignana Bharati College, Warangal, India

Intermediate (High School) with Math, Physics and Chemistry

Jul 2000 – Mar 2002

98.0%

## Selected Graduate and Undergraduate Coursework

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### Graduate Coursework:

Computer Networks, Trustworthy Computing, Participatory Sensing Using Mobile Phones, Computer Architecture, Computer Networks Lab, Security Engineering, Online Social Networks

### Undergraduate Coursework:

Computer Programming I and II (C, Algorithms and Data Structures), Microprocessors Programming and Interfacing, Digital Design, Control Systems, Communication Systems, Computer Networks, Coding Theory & Practice, Object Oriented Programming

## Skills

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**Programming/Scripting Languages:** Java, C#, JavaScript, Python

**Frameworks/Web Technologies:** ASP.NET, Django, HTML, CSS, AJAX, XML, JSON

**Databases:** MS SQL Server, MySQL and SQLite

**Tools/IDEs:** Ant, JUnit, Maven, Jenkins, Git, SVN / Eclipse, Visual Studio, MATLAB, Photoshop

## Achievements

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- Stood 5th in the state in Intermediate Public Examinations 2002 (Class XII) from among 200,000 students; awarded the prestigious Pratibha award by the Chief Minister of Andhra Pradesh for the same.
- Was awarded the Pratibha Scholarship for Academic Excellence supporting undergraduate studies (2002 – 2006).
- A 'Gold Topper', winner of the ACE (Accenture Celebrates Excellence) award under the 'Business Operational Excellence' category for the year 2007 (one among the 30 to win out of 35,000 employees in India).
- Won four CAP (Cisco Achievement Program) awards for outstanding contribution to the UCS product and team (2010 – Present)