DEBADEEP SEN

Ph.D. student in Computer Science, NCSU. Seeking internship for Summer 2017.

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Education

- North Carolina State University
  - Ph.D., Computer Science, expected December 2020 (Interests: Machine learning, data mining, intelligent user interfaces, intelligent tutoring systems)
  - Master of Computer Science, December 2012
- Jadavpur University
  - Bachelor of Electronics and Telecommunications Engineering, December 2007

Software Skills

- Programming Languages: C#, Java, C, C++
- Web Programming: JavaScript (including jQuery and Knockout), PHP (also with CodeIgniter PHP framework), ASP.NET, ASP.NET MVC, Azure framework
- Web stylesheets: CSS, CSS3
- Markup Languages: XML, HTML 4, HTML 5
- Databases: SQL Server (2000, 2005, 2008), SQL Server 2008 CE, MySQL
- Development Environments: Eclipse, Dreamweaver, Dev C++, Visual Studio 2008-2013, Netbeans IDE
- Operating Systems: Linux, Windows, Mac
- Other Technologies: Unity Game Engine, Unreal Game Engine, Qt, QML, Photoshop, Lightroom, OpenGL, OpenCV

Software Development Experience

Web Developer (October 2015 – July 2016)
RideMagiq, Seattle
- Learned the existing codebase, and familiarized myself with the Azure framework.
- Built the web user interface using HTML and CSS3.
- Used Ajax functions, in combination with jQuery and Knockout, to facilitate interactive functionality and asynchronous update with server calls.

Software Engineer (May 2013 – July 2015)
Measurement Incorporated, Durham
- Was a developer in a large-scale ASP.NET project, focused on maintaining a bank of test questions.
- Learned and used Windows Services to enable communication between different layers of code.
- Added several new functionalities to the existing code based on the client's requirements, including helping to add a new type of test question to the database and code part of the interface for question authors to create/edit them.

Software Engineer (Feb – March 2013)
Pathfinder Therapeutics, Raleigh
- Learned Qt and QML, and how to develop interactive graphical user interfaces using them.
- Explored and learned the codebase.
- Fixed existing bugs in the system, and also worked on adding new features to the existing software.

Software Devlopment Intern (May – July 2012)
Deja Mi, Raleigh
- Worked on the web front-end and admin dashboard of WedPics, an interactive photo-sharing mobile app for wedding couples. Used PHP, along with the CodeIgniter framework for work on the server-side.
- Did considerable work with JSON, coded the AJAX calls to return JSON object(s), and parsed those JSON objects to update parts of the web page.
- Took part in design and research meetings, and developed the photo slideshow for the project.
- Developed the administrative management portal to be used by the company for efficient management of the orders placed, and various other aspects of the wedding.

Software Consultant (July 2007 - June 2009)
PricewaterhouseCoopers, India
- Took part in two large scale projects, about building a web application for the Financial Services Commission of Jamaica, and building the next-generation audit software for PwC. Details available upon request.
- Experienced working in an Agile development setting. Was part of daily and weekly scrum meetings.
- Worked with ASP.NET, C# with Windows Forms, and SQL Server 2005 as well as SQL Server CE 2008.

Teaching Experience
Instructor, Duke Talent Identification Program (TIP)
- Instructor of Web Design, for two sessions in a summer camp
- Designed the syllabus and lesson plan
- Developed lecture materials
- Curriculum included both static and dynamic web development
- Taught HTML, CSS, JavaScript, ASP.NET and C#

Research Achievements
- "Prediction of web page accessibility based on structural and textual features" – Sina Bahram, Debadeep Sen, Robert St. Amant. Published in the International Cross-Disciplinary Conference on Web Accessibility (W4A '11).
- "Exploring Kinesthetic Illusions on a Touch-Based Game Controller" – Debadeep Sen, graduate research (unpublished).

Graduate Research Experience

"Prediction of web page accessibility based on structural and textual features"
- Built a web-parsing application which was capable of extracting information believed to be useful for accessibility of a web page.
- Based on training data available from multiple surveys of blind users, trained the system, using machine-learning algorithms.
- Classified the testing set with the new trained system into accessible or inaccessible web pages.

"Exploring Kinesthetic Illusions on a Touch-Based Game Controller"
- Hypothesized that visual and/or haptic feedback could lead to kinesthetic illusions in users of controlling devices.
- Built a platformer game on the Unity engine, and coded a UDP-based wireless transmission technique to transfer control of the game to a smartphone.
- Built a java-based smartphone app that made use of "microrolls", i.e., a rolling of the thumbs in opposite direction, which gives the user the impression that they are trying to bend the rigid device.
- Surveyed users, and a majority of them reported that when assisted by visual feedback, they perceived the stiff device to be elastic to some degree.