Dongtai Du

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Education

Boston University   Aug.2014-May.2016
M.S. in Computer Engineering: Computer Networks, Operating System, Analysis of Algorithms,
Advanced Data Structure, Cloud Computing, Machine Learning

University of Science and Technology of China(USTC)   Sept.2010-June.2014
B.S. in Physics

Technical Skills

Languages: C, C++, C# , Java, JavaScript, HTML/ CSS, Python.
Environment: Windows32 Desktop, Linux, ASP.NET, Apache Tomcat

Professional Experience

Software Development Engineer Intern   Sogou Inc. Beijing, Dec.2015-Jan.2016
- Rebuilt a Dynamic Link Library(DLL) for Sogou Pinyin using C++, which could uniquely identify a PC by using MD5 to generate a 16 byte serial number based on hardware information. Greatly reduced the checking error rate and make it applicable in more situations.
- Using TortoiseSVN to manage codes.

Environment: Windows Desktop development, C++, Visual Studio.

Graduate Teaching Assistant   Boston University, Feb.2016-May.2016
- Lab assistant & grader for EC512-Enterprise Client/Server Software. C# ,ASP.NET development. Helped answer all the questions from students and set up test case for homework assignments.

Academic Project

Cloud-Computing - Per-tenant OpenStack Pass-Through Service   Mar.2015-May.2015
- Wrote a web application that allows cloud users to seamlessly leverage Openstack services from various providers .
- Establish a proxy server between the client and the Openstack Platform on Linux using Python Flask Library.

Environment: Linux, Python, HTML/CSS, OpenStack API, HTTP programming.

Web Developer of User Management System   April.2015
- Using ASP.NET Web Form and C# to develop a full stack website which allows users to register, maintain and modify their own account and check out part of other users information.
- Implemented the website's service logic including cookie, session state, database connectivity, security requirement, and authentication of clients.

Environment: C# , ASP.NET, HTML/CSS, SQL server.

An extension of Google Map - MapApp   Sep.2015-Dec.2015
- Using Java and Google Map Api to build a web application on Amazon EC2 Linux Server with a data-set containing 2 million coordinates. It displays a map of US and support range search and nearest neighbor search.
- Implemented K-D Tree based backend in java, reduce time complexity from $O(n)$ to $O(lgn)$.
- Using JavaScript and JQuery & AJAX to build the application webpage.

Environment: Linux, Apache Tomcat, HTML/CSS, Java, JavaScript, JQuery, AJAX.

Machine Learning - AlFont   March.2016 - May.2016
- Wrote two multi-layer convolution neural networks that are able to learn, identify and generate characters in specific font.
- Collect and generate characters as training data using over 10,000 fonts.Train the network using mini-batch gradient descent.
- As the leader of the team, I made plans and held group meetings.

Environment: Python Numpy & Theano library, Matlab script.

Research Experience

Virtual Channel in Wormhole Routing Algorithms to Prevent Deadlock in Network   Boston University.
- MS projects with prof. Lev Levitin. Developed and analyzed a new algorithm to solve the deadlock problem in Multi-Computer System used in Massive Parallel Processing. It create a possibility that could greatly reduce the average traveling time for packets in networks.