

# Shantanu Ghosh

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<b>OBJECTIVE</b>	<i>To secure a PhD position in the area of Machine Learning/Deep Learning with a focus of Computer Vision and Causal Inference</i>
<b>RESEARCH INTERESTS</b>	<i>Machine Learning, Deep Learning, Computer Vision, Causal Inference</i>
<b>EDUCATION</b>	<p><b>University of Florida</b>, Gainesville, FL, USA <i>Master of Science</i>, Computer and Information Sciences Aug, 2019 - Aug, 2021 <span style="float: right;">GPA: 3.78/4</span></p> <p><b>West Bengal University of Technology</b>, West Bengal, India <i>Bachelor of Technology from Institute of Engineering and Management</i> Computer Science and Engineering Aug, 2008 - Aug, 2012 <span style="float: right;">GPA: 8.38/10</span></p>
<b>EXPERIENCE</b>	<p><b>Lexmark International India Pvt Ltd</b>, Kolkata, West Bengal, India <i>Software Engineering Professional II</i> <span style="float: right;"><b>Oct 2016 - July 2019</b></span> Worked as a Senior UI developer for the product Publishing Platform for Retail(PPR) and developed InStore Publisher component(ISP) of PPR using Angular, Bootstrap, HTML5, CSS and performed unit testing using Jasmine/Karma Framework with active participation in 2 major releases.</p> <p><b>Cognizant Technology Solutions India Pvt Ltd</b>, Kolkata, West Bengal, India <i>Associate, Projects</i> <span style="float: right;"><b>February 2016 - September 2016</b></span> As an Application developer for the project Wells Fargo Domain Services and Customer Centre Optimization developed WCF web services in Contract First Approach to provide secure communication between different In-house applications and the reporting platform of Wells Fargo using Service Oriented Architecture (SOA) using C# .Net 4.0/ 4.5.2, Oracle Client 11g. Also Trained C# and Oracle to the new recruits in the Cognizant Academy.</p> <p><b>Cognizant Technology Solutions India Pvt Ltd</b>, Kolkata, West Bengal, India <i>Programmer Analyst</i> <span style="float: right;"><b>March 2013 - January 2016</b></span> As an FULL STACK developer developed the 1EXF(Excellence First) Web Application using Oracle 10g, C# .Net 3.5/4.0, Angular Js, HTML, CSS, Bootstrap and built the 1EXF Batch application architecture using C#, Unity Framework, Dependency Injection and Interception.</p>
<b>PROJECTS</b>	<p><b>Texture Classification (<i>In Progress</i>)</b> <span style="float: right;"><b>Feb 2020 - current</b></span> <i>Individual Study, University of Florida, FL, USA</i></p> <p>Developing a Deep Convolutional Neural Network with Multitask Learning to classify different textures within a image under the supervision of Dr Prof Dapeng Oliver Wu.</p> <p><b>Classification of Handwritten Characters</b> <span style="float: right;"><b>Sep - Dec 2019</b></span> <i>Fundamentals of Machine Learning, University of Florida, FL, USA</i></p> <p>Developed a deep CNN to classify Handwritten Characters, by training it with the Handwritten Character Dataset under the guidance of Prof Alina Zare by inspired by the famous architecture "<b>Lenet</b>" (<a href="http://yann.lecun.com/exdb/publis/pdf/lecun-">http://yann.lecun.com/exdb/publis/pdf/lecun-</a></p>

01a.pdf) by utilizing the Adam Optimizer and Batch Normalization and achieved a classification accuracy of **97.3%**

- **Technology/Tools:** Python, Pytorch
- **Link :** <https://github.com/Shantanu48114860/Handwritten-Character-Recognition>

### **Implementation of P2P network**

**Nov - Dec 2019**

***Computer Networks, University of Florida, FL, USA***

Created a peer-to-peer network for file downloading. There are two pieces of software – peer and file owner. The file owner has a file, and it breaks the file into chunks of 100KB, each has been stored as a separate file. Each peer connects to the file owner to download some chunks. It then has two threads of control, one acting as a server that uploads the local chunks to another peer (referred to as upload neighbor), and the other acting as a client that downloads chunks from a third peer (referred to as download neighbor). So each peer has two neighbors, one of which gets chunks from this peer and the other sends chunks to this peer.

- **Technology/Tools:** Socket Programming, Java
- **Link :** <https://github.com/Shantanu48114860/P2P-File-sharing>

### **Hashtag Counter**

**March - April 2020**

***Advanced Data Structures, University of Florida, FL, USA***

Implemented a system to find the most popular hashtags that appear on social media such as Facebook or Twitter using Max Fibonacci Heap data structure. For the scope of this project hashtags will be given from an input file. Basic idea for the implementation is to use a max priority structure to find out the most popular hashtags.

- **Technology/Tools:** Java
- **Link :** <https://github.com/Shantanu48114860/HashTagCounter>

### **TECHNICAL SKILLS**

**Languages :** Python, C++, C, Java, C#, Javascript/Typescript  
**Database :** MySQL, Oracle 9i/10g, MS SQL Server, DB2  
**Web Development :** Angular, Node.js, WCF  
**Infrastructure/ Build :** AnthillPro, Jenkins  
**Machine Learning :** TensorFlow, PyTorch, NumPy, Scikit-learn

### **CERTIFICATION .**

- **Mathematics for Machine Learning: Linear Algebra** by Imperial College of London on *Coursera*  
Verify : <https://www.coursera.org/account/accomplishments/certificate/WQ4T9KJY9BMQ>
- **Mathematics for Machine Learning: Multivariate Calculus** by Imperial College of London on *Coursera*  
Verify : <https://www.coursera.org/account/accomplishments/certificate/6T8VSZFQQTL3>
- **Neural Networks and Deep Learning** by Prof Dr Andrew Ng on *Coursera*  
Verify : <https://www.coursera.org/account/accomplishments/certificate/7QTVEMQDCBYT>
- **Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization** by Prof Dr Andrew Ng on *Coursera*  
Verify : <https://www.coursera.org/account/accomplishments/certificate/K5CPQ59DJU4H>
- **Convolutional Neural Networks by Prof Dr Andrew Ng on Coursera**  
Verify : <https://www.coursera.org/account/accomplishments/certificate/Q5C738AYSZ3Q>

### **GRADUATE COURSES**

- Fundamentals of Machine Learning
- Distributed Operating Systems
- Computer Networks
- Mathematics for Intelligent Systems
- Advanced Data Structures

### **ACHIEVEMENTS .**

- Recipient of **National Scholarship Award from Central Government Human Resource Development Department of Higher Education, India** for excellent

result in Higher Secondary Examination in the state of West Bengal, India.

- Topped with **1%** of all candidates appeared in **West Bengal Joint Entrance Examination** in 2008.