

# 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>Deep Learning, Machine Learning, Computer Vision, Causal Inference</i>	
<b>EDUCATION</b>	<b>University of Florida</b> , Gainesville, FL, USA <i>Master of Science, Computer and Information Sciences</i> Aug, 2019 - Aug, 2021	GPA: 3.88/4
	<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	GPA: 8.38/10
<b>RESEARCH EXPERIENCE</b>	<b>Data Intelligence Systems Lab (DISL)</b> , Gainesville, FL, USA <i>Graduate Student Researcher</i> Developing a Deep Auto encoder based Neural Network model to perform propensity score matching to estimate average causal effect of a treatment in the area of Causal Inference under the supervision of Dr Prof Mattia Prosperi of the department of Epidemiology in the University of Florida.	<b>May 2020 - Present</b>
	<b>Multimedia Communications and Networking Laboratory (MCN)</b> , Gainesville, FL, USA <i>Independent Researcher</i> 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 of the Department of Electrical & Computer Engineering in the University of Florida.	<b>Feb 2020 - Present</b>
<b>EXPERIENCE</b>	<b>Lexmark International India Pvt Ltd</b> , Kolkata, West Bengal, India <i>Software Engineering Professional II</i> 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.	<b>Oct 2016 - July 2019</b>
	<b>Cognizant Technology Solutions India Pvt Ltd</b> , Kolkata, West Bengal, India <i>Associate, Projects</i> As an Application developer for the project Wells Fargo Domain Services and Customer Centre Optimization, developed WCF web services in the 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.	<b>March 2013 - September 2016</b>
<b>PROJECTS</b>	<b>Classification of Handwritten Characters</b> <i>Fundamentals of Machine Learning, University of Florida, FL, USA</i>	<b>Sep - Dec 2019</b>
	Developed a deep CNN to classify Handwritten Characters, by training it with the Handwritten Character Dataset under the guidance of Prof Alina Zare, inspired by the famous architecture " <b>Lenet</b> " ( <a href="http://yann.lecun.com/exdb/publis/pdf/lecun-01a.pdf">http://yann.lecun.com/exdb/publis/pdf/lecun-01a.pdf</a> )	

by utilizing the Adam Optimizer, Batch Normalization and dropout and achieved a classification accuracy of **97.3%** on a customised data set prepared by Prof Zare

- **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. Developed two pieces of software – peer and file owner. The file owner has a file, and it breaks the file into chunks of 100KB. 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).

- **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 and 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 • Machine Learning • Deep Learning Comp Graphics • Fundamentals of Probability

### **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.