

Ayon Sen

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EDUCATION

UW-MADISON

PHD IN COMPUTER SCIENCES

Grad. June 2020 | Madison, WI
Conc. in Machine Learning

BUET

MSC IN CSE

Grad. May 2014 | Dhaka, Bangladesh
Conc. in Machine Learning
Cum. GPA: 3.92 / 4.0

BSc in CSE

Grad. April 2012 | Dhaka, Bangladesh
Cum. GPA: 3.94 / 4.0
Merit Position: 2nd

LINKS

LinkedIn: // ayonsn
Twitter: // @ayonsn
dblp: // AyonSen

COURSEWORK

GRADUATE

Machine Learning
Advanced Machine Learning
Mathematical Statistics-I
Statistical Inference
Data Science
Non-Linear Optimization-I
Human Computer Interaction
Neural Networks
Data Mining
Advanced Computer Networks
Distributed Computing Systems

UNDERGRADUATE

Artificial Intelligence
Pattern Recognition
Computer Graphics
Database
Computer Networks

SKILLS

PROGRAMMING

C • C++ • Java • C# • Spring • Git
HTML • JavaScript • SQL • Matlab
Oracle 11g • Shell • MySQL • Python
LaTeX • ASP.NET • Crystal Report • XML
JSON • MapReduce • JEXL • Prolog
Weka • Nachos • Lex • YACC

EXPERIENCE

FACEBOOK | RESEARCH SCIENTIST

Aug 2020 – | Seattle, WA

I joined Facebook as a research scientist. My duties include researching, designing and developing new optimization algorithms and techniques to improve the efficiency and performance of Facebook's platform. Moreover, I design and implement large-scale distributed software system to serve large number of complex requests simultaneously and without failure.

UW-MADISON | GRADUATE RESEARCH ASSISTANT

Aug 2015 – June 2020 | Madison, WI

I worked under the supervision of Prof. Xiaojin (Jerry) Zhu on the Machine Teaching problem. In machine teaching the teacher knows the target goal such as the target model. Based on this known target she wants to design an optimal training set for the learner. Machine teaching has applications both in the fields of educational psychology as well as computer security. My current research is mostly focused on educational psychology such as chemistry, mathematics and language learning as well as human perception of adversarial examples.

FACEBOOK | PHD INTERN

May 2019 – Aug 2019 | Seattle, WA

I worked on the Pages Integrity team on the Business Impersonation Detection problem. Impersonation is a serious problem that often acts as a gateway to a variety of other issues such as privacy violations, data breach, phishing attacks, scams, misinformation etc. causing heavy damage to both users and Facebook. I focused on building the backend infrastructure for realtime impersonation detection based on text. In particular I used different text matching techniques (including a Siamese DNN) that are robust to adversarial obfuscations. My efforts helped increase the coverage of impersonation detection by around 20% with improved precision.

RESEARCH

RESEARCH INTEREST

- Machine Learning.

SELECTED PUBLICATIONS

- Ayon Sen, Xiaojin Zhu, Erin Marshall, Robert Nowak: Popular Imperceptibility Measures in Visual Adversarial Attacks are Far from Human Perception. Gamesec 2020
- Ayon Sen, Scott Alfeld, Xuezhou Zhang, Ara Vartanian, Yuzhe Ma, Xiaojin Zhu: Training Set Camouflage. Gamesec 2018.
- Ayon Sen, Purav Patel, Martina A. Rau, Blake Mason, Robert Nowak, Timothy T. Rogers, Xiaojin Zhu: Machine Beats Human at Sequencing Visuals for Perceptual-Fluency Practice. EDM 2018.
- Ayon Sen, Md. Monirul Islam, Kazuyuki Murase, Xin Yao: Binarization With Boosting and Oversampling for Multiclass Classification. IEEE T. Cybernetics 2015, Issue 99.
- Ayon Sen, Sheeraz Ahmad: Learning Substitutes Relationship with Deep Ranking. AMLC 2018.