Harshit Agarwal

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EDUCATION

University of Illinois At Urbana Champaign

MS in Computer Science
Expected May 2018
GPA: 3.92/4.00

BS in Computer Science
May 2017
GPA: 3.68/4.00

Dean's List Fall 2016, Spring 2016
James Scholar
Course Staff for Honors Intro to CS

COURSEWORK

Applied Machine Learning
Adv. Distributed Systems
Adv. Social and Information Networks
Computational Photography
AI for Autonomous Vehicles
Machine Learning for Signal Processing

SPRING 2018
Data Mining Principles
Social Sensing

SKILLS

Experienced:
Python • Java • C++ • Scala
C • Matlab • SQL • MongoDB
Familiar:
Shell • JavaScript • R • Go
HTML • CSS • Haskell • MIPS
Other Technologies:
Kafka • Storm • Spark
ElasticSearch • TensorFlow
ScikitLearn • Avro • PCL • Mesos
OpenCV • Akka

MISCELLANEOUS

Some people know me for my memes. I use my knowledge about emergent behaviors in online communities to explain memes. I've presented this at UIUC and at Salesforce and have gained fame on Reddit for the same.

WORK EXPERIENCE

Salesforce | Data Engineering Intern — Summer 2017

Intern on the Salesforce's Einstein Platform team. Built an updated data delivery and verification architecture to propagate scoring results for leads processed by the platform's models. This primarily involved working with Spark. Also helped migrate services for the platform onto Azkaban.

SalesforceIQ | SWE Intern — Summer 2016

Built a Slack bot that enables users to run queries from within Slack and to get configurable push notifications for important updates. Also helped build the architecture for live notifications and webhooks in services connected to SalesforceIQ.

State Farm | Systems Intern — Summer 2015

Built an in car gesture recognition system to detect distracted driving. Built using random forests and neural networks trained on collected point clouds and image data.

RESEARCH

Distributed Protocols Research Group

http://hagarwa3.web.engr.illinois.edu/gnuggies.pdf
Working on GNuggies - a framework for hosting web services on untrusted volunteer nodes. The goal is to make censorship impossible online by enabling large scale resource sharing. GNuggies features a novel trust mechanism, has high resilience guarantees and provides incentives for continued participation. The paper is currently being written, but the current state can be viewed at the provided link.

Crowd Dynamics Lab at UIUC

Worked with Professor Hari Sundaram on mobile crowdsourcing incentive mechanisms for public infrastructure maintenance. The objective of this project was to design a mobile crowdsourcing platform and a novel weighted auction mechanism to reward reporting of public infrastructure damage.

PROJECTS

IllinoisAUV RoboSub — July 2017

Our team made it to the semi-finals in the annual RoboSub (autonomous submarine) competition. I built vision based strategies for our submarine to navigate a challenge course. This involved both, offline vision models and Faster RCNNs to identify and locate various objects underwater and perform specific tasks related to them.

Lane Detection in Autonomous Vehicles — Spring 2017

Used Hough Transform and Inverse Perspective Mapping to detect lanes from live video in an autonomous car. Used basic motion strategy for planning lane changes. Partnership between UIUC and AutonomouStuff.

ACTIVITIES

Association of Data Science and Analytics | President

Jan 2015 – Present | Urbana, IL
Managed different data based projects, including stock trend prediction and search relevance prediction. Also organized sample projects and resources for workshops on Spark, databases, Python, basic machine learning and basic NLP.
Also started and organized the ADSA Data Summit, UIUC's first student run big data conference.