Kuntal Roy

✉ roy.kuntal.osu@gmail.com 📍 Columbus, OH 📞 (614) 441-7599 in roykuntal

EDUCATION

THE OHIO STATE UNIVERSITY
MS in Computer Science
Expected May 2021 | Columbus, OH
CGPA: 3.95/4.0

INDIAN INSTITUTE OF ENGINEERING SCIENCE & TECHNOLOGY SHIBPUR
BE in Electronics & Telecommunication
May 2015 | Howrah, India
CGPA: 8.79/10.0 (Rank 7/45)

LINKS

Github:// **kroy1809**
LeetCode:// **kuntalroy**

SKILLS

PROGRAMMING
Proficient:
Python • Java • R • SQL • Git
SAS • MATLAB • C/C++ • Shell

Familiar:
JavaScript • Docker • Golang
PHP • HTML/CSS • Jira (Agile)

Libraries & Tools:
PyTorch • TensorFlow • NumPy
MySQL • Teradata • MongoDB
Django • Flask • REST API
Tableau • RShiny • Bootstrap
Node.js • GCP • AWS EC2

COURSEWORK

GRADUATE
Advanced Operating Systems
Programming Languages
Algorithms & Data Structures
Distributed Enterprise Computing
Data Mining
Machine Learning
Speech and Language Processing

UNDERGRADUATE
Computer Architecture
Image Processing & Computer Vision
Microprocessors & Micro-controllers

EXTRA CURRICULAR

Impact Award 2018 by Mu Sigma for workshop on applications of ML/AI in healthcare • **GAABESU Leadership Award 2013** for winning IEEE paper presentation • **Core Team** member, **Instruo 2014** • **INSPIRE** scholarship

EXPERIENCE

SAFE AUTO | Software Engineer Intern
May 2020 – Present | Columbus, OH
- Designing a robust and optimized algorithm for **paid search advertisement bidding** utilizing the existing bid landscapes [**Google Ads API, PySpark**]

OSU COLLEGE OF SOCIAL WORK | Research Assistant
Mar 2020 – Apr 2020 | Columbus, OH
- Designed a **React app** to view Twitter data related to child abuse, filtered through a **Naive Bayes classifier** to determine relevance [**Django, MongoDB**]

HSBC HOLDINGS PLC | Software Engineer
Dec 2018 – Jul 2019 | Kolkata, India
- Designed & developed a web platform to **forecast** different portfolio level **credit card metrics** to assist the partners in formulating their targets & devising offers in real-time, while staying within the **20% risk threshold** [**Flask**]
- Enabled relationship managers to drive healthy conversations by designing & developing an internal **web app** *Customer360* to showcase customer history and insights, leading to 80% less complaints [**Docker, React**]

MU SIGMA | Software Developer
Aug 2015 – Nov 2018 | Bengaluru, India
- Proactively automated the creation of a **4-level healthcare facility hierarchy** in production where ∼**100k relations** were setup from web-scraped spatial data using the community detection algorithm [**Geocoding, REST API development**]
- Provided tactical fixes to **over 150 bugs** and handled **20k exceptions** in the overall hierarchy process flow [**Data Modeling/Validation, BPMN, RCA**]
- **Automated 90% of financial calculations** by developing a micro-service architecture and exposing **REST APIs** using **Spring Boot** framework [**Java**]
- Developed and migrated an assortment planning tool to a **Data Lake** based architecture [**BigQuery, Dataproc**] to improve weekly to daily data refreshes

PROJECTS

QUANDARY INTERPRETER | Feb 2020 - Apr 2020
Designed and implemented the parser and interpreter to develop a programming language *Quandary* (**Lisp**-like semantics) in **Java** from scratch, with in-built features like static & dynamic checking, garbage collection and concurrency [**JFlex, CUP**]

MATH WORD PROBLEM SOLVER | Oct 2019 - Dec 2019 ⚡
Constructed and solved mathematical equations from word problems scraped from Yahoo answers • Achieved an **accuracy of** ∼**54%** by matching equation templates using sequence trees and Recursive NN architecture [**PyTorch, Pandas**]

PLAGIARISM DETECTOR | Oct 2019 - Nov 2019 ⚡
Generated set of signatures using different hash functions and sparse matrices to bucket similar documents together to reduce comparisons by **85%** [**NLTK, SciPy**]

AD2TECH | Nov 2019 (Adjudged one of the most useful hacks in HACK OHI/O 2019) ⚡
Developed a **chrome extension** that incentivizes users to donate to charity by giving them a discount by watching an advertisement video [**Bootstrap, Node.js, Express**]

MOVIE REVIEW CLASSIFICATION | Aug 2019 - Sep 2019
Classified reviews on IMDB, Amazon & Yelp into positive, negative and neutral with ∼**87% accuracy** • Used **GloVe embeddings** in deep neural net structures (**CNN** and **FFNN**), **Naive Bayes** and **Perceptron** models were tested as baselines [**TensorFlow**]