Joymallya CHAKRABORTY

https://joymallyac.github.io/ ◇ Github: github.com/joymallyac
810 Dexter Avenue N, Seattle, WA 98109

Email : chkrjoymallya@gmail.com
Mobile : +1-919-633-2503

EDUCATION

Ph.D. in Computer Science   Aug. 2017 – March 2022
North Carolina State University, Advisor - Dr. Tim Menzies (timm@ieee.org)   *Raleigh, NC*

BE in Computer Science   Jun 2011 – Jun 2015
Jadavpur University   *Kolkata, India*

TECHNICAL SKILLS

General Expertise: Machine Learning, Deep Learning, Data Science, Software Engineering, Compiler, Program Analysis, Optimization;
Programming: Proficient: C/C++/Java (8+ years), Python(6+ years). Working Knowledge: R, SQL, AngularJS, CUDA, NodeJS;
DevOps: Docker, Kubernetes, AWS, Ansible, Vagrant, Travis, Jenkins.

WORK EXPERIENCE

Amazon.com Services, LLC   Seattle, WA
Applied Scientist II, Amazon Science   *May 2022 - Present*

○ Working as a member of the Abuse Prevention Science team to find and prevent seller abuse on Amazon platform.
  Languages: *Python, SQL;* ***Frameworks:*** *AWS, Cradle, Deep Learning*

IBM Research   Yorktown Heights, NY
Ph.D. Research Intern, System Design   *May 2020 - Aug. 2020*

○ Worked on State Management & Persistence in Mono2Micro which converts Monolith applications to Microservices.
  Languages: *Java;* ***Frameworks:*** *Kubernetes, Redis, RabbitMQ*

Intel Corporation   Bellevue, WA
Software Engineering Research Intern, Deep Learning   *May 2019 - Aug. 2019*

○ Worked on computational graph optimization and post-training quantization of CNN models.
  Languages: *C++, Python;* ***Frameworks:*** *Onnxruntime, Ngraph, TensorFlow,* ***Model:*** *Resnet50*

Intel Corporation   Bellevue, WA
Software Engineering Research Intern, Compiler Optimization   *May 2018 - Aug 2018*

○ Explored optimization opportunities of .NET Core Garbage Collection and implemented PoC (Proof of Concept) prototypes.
  Languages: *C++, .NET;* ***Frameworks:*** *.NET Framework, VTune*

TCG Digital   Kolkata, India
Software Developer, Java & AngularJS   *June 2015 - July 2017*

○ Worked in a Business Intelligence Software to retrieve, analyze, transform and report business related data.
  Languages: *Java, Bootstrap, JQuery, Angular JS, Node JS , Require JS, C3 JS, D3 JS;* ***Frameworks:*** *Elasticsearch*

SELECTED PUBLICATIONS

[1] Chakraborty J., Majumder S., Huy Tu., *"Fair-SSL: Building fair ML Software with less data"*. In **International Workshop on Equitable Data and Technology (FairWare), 2022**. Online: https://arxiv.org/abs/2111.02038;

[2] Chakraborty J., Majumder S., Menzies T., *"Bias in Machine Learning Software: Why? How? What to do?"*. In **Foundations of Software Engineering (ESEC/FSE), 2021**. Online: https://arxiv.org/abs/2105.12195; **ACM SIGSOFT Distinguished Paper Award Winner**

[3] Chakraborty J., Majumder S., Yu Z., Menzies T., *"Fairway: A Way to Build Fair ML Software"*. In **Foundations of Software Engineering (ESEC/FSE), 2020**. Online: https://dl.acm.org/doi/10.1145/3368089.3409697;

[4] Chakraborty J., Peng K., Menzies T., *"Making Fair ML Software using Trustworthy Explanation"*. In **International Conference on Automated Software Engineering (ASE), 2020**. Online: https://dl.acm.org/doi/10.1145/3324884.3418932;

[5] Chen J., Chakraborty J., & Menzies T., *"Predicting Breakdowns in Cloud Services (with SPIKE)"*. In **Foundations of Software Engineering (ESEC/FSE), 2019**. Online: https://dl.acm.org/doi/abs/10.1145/3338906.3340450;

[6] Imtiaz N., Middleton J., Chakraborty J., *"Investigating the Effects of Gender Bias on GitHub"* In **International Conference on Software Engineering (ICSE), 2019**. Online: https://ai.google/research/pubs/pub47860;

[7] Chakraborty J., Xia T., Fahid M., Menzies T., *"Software engineering for fairness: A case study with hyperparameter optimization"* In **International Conference on Automated Software Engineering (ASE), 2019**. Online: https://arxiv.org/abs/1905.05786;

[8] Chakraborty M., Chowdhury S., Chakraborty J., Mehera R., Pal R., *"Algorithms for generating all possible spanning trees of a simple undirected connected graph: an extensive review"* In **Complex & Intelligent Systems (Springer),2018**. Online: https://link.springer.com/article/10.1007/s40747-018-0079-7;