Sajib Sen

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EXPERIENCE

- **ReTrans, Inc.** — Memphis, TN
  Software Engineer Intern — *Sept. 2019 - Dec. 2019*
  - **Testing**: Improved codebase quality by implementing unit, integration and regression tests for files in Django.
  - **Enhancement**: Resolved issues and customer reported bugs to enhance code functionality and usability.
  - **Migration**: Migrated code-base from Python2 to Python3, documented, and reported in daily stand-up.

- **UMRF Ventures Inc.** — Memphis, TN
  System Analyst Intern — *Sept. 2019 - Dec. 2019*
  - **Data Analysis**: Analyzed big dataset provided by FedEx InfoSec team using Splunk; evaluated by presented findings through Splunk's dashboards, visualizations, alerts, and reports.
  - **Data Evaluation**: Improved 50% stored data health by comparing with Splunk's Common Information Model.
  - **Enhancement**: Looked for trends in data, monitored digital health of FedEx systems, confirmed data sources were reporting consistently and created knowledge articles with in-depth explanations of various data sources.

- **University of Memphis** — Memphis, TN
  Research and Teaching Assistant — *Aug. 2017 – Apr. 2020*
  - **Recover Image**: Implemented model to recover image, resized to downscale, measured by the image quality.
  - **Fair AI**: Analyzed unwanted algorithmic biases for prediction and optimization using explainable AI.
  - **FEMA Projects**: Increased 20% user participation by introducing puzzle-based/interactive learning in two FEMA funded Cyber Emergency Training Projects. Collaborated with Texas A&M Engineering Extension Service.
  - **Evolutionary Computation**: Collaborated with graduate students for their metaheuristic algorithm projects.
  - **Data Structures and OOP**: Worked as Scrum Master to mentor four students' projects. Ran lab work, involved in creating assignments, graded papers, and supervised two other TAs.

EDUCATION

- **University of Memphis** — Memphis, TN
  Master of Science in Computer Science, Overall GPA: 3.87/4.00 — *Aug. 2017 – Apr. 2020*
  - **Dissertation**: Empirical Analysis on Algorithmic Bias for AI-Based Decision Making System.

- **Khulna University of Engineering and Technology** — Khulna, Bangladesh
  Bachelor of Science in Electrical and Electronic Engineering, Overall GPA: 3.58/4.00 — *Mar. 2010 – Sept. 2014*

PROJECTS

- **Rent-A-Car**: Software as a Service (SaaS) application to rent cars using Django, Python, MySQL.
- **Premium Fitness**: Paid membership service provider on the web using Stripe REST API with Django, Python.
- **Hackathon Organizer**: A web-based events (hackathon) management system using Ruby on Rails and MySQL.
- **Reviewer Verification**: A web-based reviewer verification system using Django, Python, and NLTK.
- **Big File Converter**: File conversion service (json to parquet/avro and vice-versa) using PySpark and Django.
- **Cost-to-Messenger**: Sharing costs for events using Messenger PSID, and Flask, MySQL, Heroku as backend.

LANGUAGES AND TECHNOLOGIES

- **Programming/Scripting Languages**: Python, SQL, Linux Shell Scripting, Java (prior experience).

- **Technologies**: Linux, Django, Git, MySQL, AWS, Docker, Kubernetes, Agile Development.

- **Machine Learning**: Traditional algorithms (Support Vector Machine, Logistic Regression, Decision Trees, Neural Network, etc.), Convolutional Neural Network (CNN).

PUBLICATIONS

- **Sen S.**, Dasgupta D., Gupta K.D. *An Empirical Study on Algorithmic bias.* AIML-2020: IEEE International Workshop on Advances in Artificial Intelligence & Machine Learning: Addressing Risks & Concerns. 2020.