Joy Ghosh

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		GitHub	github.com/OvroAbir

Work Experience

- Graduate Research Assistant at **Dept. of Computer Science**, **Colorado State University** (Aug 2019 - Present)

  Area - **Software Engineering**. My advisor is Dr. Laura Moreno. Working on automatically detecting Domain Data Constraints in Software Documentation artifacts. Currently constructing patterns of constraint descriptions to feed into **NLP** model.

- Junior Software Engineer at KONA Software Lab Ltd., Dhaka (Feb 2018 - May 2019)

  - Decreased file read/write time in **USIM** card by **26%** after changing internal file system data structure to hash map based architecture. Used **Java** and followed **3GPP**, **ETSI** standards.

  - Decreased **4G authentication** time of **USIM** card by **31%** by skipping common calculations.

  - Developed features like undo/redo operations for GUI based USIM personalization tool using **Java Swing**.

  - Researched different **Delta encoding** algorithms for FOTA servers and tested their performance on **Wandboard Quad**. Worked with **C**, **u-boot**.

- Junior Programmer at CTrends Software and Services Ltd., Dhaka (Oct 2017 - Jan 2018)

  - Worked on automating business processes in **ERP** Software. Used **Spring MVC**, **Hibernate**, **HTML5**, **CSS3**, **Bootstrap**, **jQuery**, **PostgreSQL**.

Education

Aug, 2021 (Expected)	M. S. in Computer Science **Colorado State University**, Fort Collins, Colorado.
Sept, 2017	B. Sc. in Computer Science and Engineering **Bangladesh University of Engineering and Technology**, Dhaka, Bangladesh.

Skills

Language	C / C++, Java, Python, PHP
Database	Oracle SQL, MySQL, PostgreSQL
Web Development	HTML5, CSS3, Bootstrap, JavaScript, jQuery
Framework	Laravel, Spring MVC, Hadoop

Notable Projects

- **Tutorial Buddy** - Developed a tool that can identify when a certain topic was discussed in a lengthy YouTube video. Used **Python**, **Tesseract OCR**, **OpenCV**, **Wit.ai Speech Recognition** API.

- **Distributed Fact checking System for News articles** - Developing a distributed system to find similar news articles from over **9,410K** articles with a goal of comparing facts of a news from different sources. Using **Apache Spark**, **MLlib**.

- **Distributed and Fault Tolerant File System** - Developed a tool where people can upload & retrieve files to a **Distributed Network**. **Fault Tolerance** is achieved via **Replication** and **Erasure Coding**. Used **Java**, **TCP**, **Reed-Solomon** API.

- **USNews Scrapper** - Developed a tool to store University ranking data from **usnews.com** in **excel** file. Used **Python**.

  - Can be installed from **PyPi** by **'pip install usnews-scrapper'** command.

- **Train Alert** - Developed an **Android** app that alerts user about nearby trains to stop accident. Used **Google Play services** location API, **REST** API, **MySQL**, **Raspberry Pi**, **GPS module**.

- **Movies360** - Developed a movie website similar to IMDB. Used **Laravel**, **MySQL**, **HTML5**, **CSS3**, **PHP**.

- **Spade** - Developed a multiplayer card game to play via **LAN**. Used **Java**, **Java Swing**, **Socket Programming**.

- **Personal Website** - Developed a website hosted at **www.ijoyghosh.com**. Used **BootStrap**, **CSS3**, **jQuery**.

- **Graph Plotter** - Developed a tool that can plot 2D and 3D graphs from equations. Used **C**, **iGraphics**.

Academic Honors

- Technical Scholarship from Bangladesh University of Engineering and Technology (2013)
  - Awarded for good performance in B.Sc. admission test. Ranked **186th** out of nationwide 50,000 applicants.

Other Activities

- Tutored an Undergrad student on CS classes (Algorithms, Data Structure, Digital Logic Design, OOP, AI) for over 2 years.
- Created Bengali subtitle of movie 'Man of Steel' with a rating of 10/10 and over 3000 downloads.