Kaustav Ghosh

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EDUCATION

Manipal Institute of Technology 2018-2022
BTech in Computer Science & Engineering specializing in Computational Intelligence **Lab Work:** [Repository]. CGPA: 8.54/10

WORK EXPERIENCE

- **Hevo Data, Bangalore - Software Engineer Intern** Jan'22-Jun'22
  - Designed and implemented an end-to-end connector and SDK for the data source, Braze, a software as a service (SaaS) platform for Customer Engagement by deciding the source objects, the polling strategies, building the SDK authentication, models, client, and the connector offset, tasks, and services for polling each source object. All of this was supplemented by appropriate error handling for Socket Connection and Polling.
  - Worked on and resolved several bugs on already existing connectors tracked by Sentry and Coralogix
  - Worked on resolving Google Big-Query and Marketo On-call issues supported with Senior developers
  - Developed Unit tests for Outbrain.
- **Samsung R&D, Bangalore - Software Engineer Intern, IoT Products & Analytics** Jun'21-Jul'21
  - Developed and implemented MQTT bridge functionality in Moquette, an open-source lightweight Java MQTT broker
  - Developed a socket programming system for transfer of messages between the MQTT message broker and the bridge client
  - Developed a lexical analyzer to parse the user-specified configuration of the bridge properties
- **Microsoft Student Partners - Machine Learning Intern** Apr'20-Jun'20
  - Guided a team of 10 individuals to collaborate and accomplish a Regression task of price prediction of used cars in a machine learning pipeline through Exploratory Data Analysis,Feature Engineering and Model Building. **Projects:**[Minor]. [Major].
- **TakenMind Technologies - Data Analytics Intern** May'20
  - Worked on analysing Industrial Data, predicting and presenting trends, using techniques such as Exploratory Data Analysis and Data visualisation using Matplotlib and Seaborn.Implemented several barplots, heatmaps, etc on several datasets.Implemented Machine Learning Algorithms (such as Random Forests).Obtained 87% test accuracy. **Source Code:** [Notebook].

RESEARCH WORK

- **Samsung PRISM - Machine Learning Intern** Sep'20-Mar'21
  Intelligent Ranking for Dynamic Restoration of Next Generation Wireless Networks
  - Implemented Machine Learning algorithms and Feature Engineering techniques to predict KPI values for eNodeB-s and consequently a ranking system to orderly restore them during network failure.

PROJECTS

- **Compiler Front-end for subset of C-Language**
  - Coded a **Lexical Analyser** that extracts tokens from a C source file and a **Symbol Table Generator** to store information of identifiers and functions and a **Recursive Decent Parser** that semantically parses the grammar for subset of C-Language by analysing the tokens generated. [Demo] **Source Code:** [Lexical Analyser + Symbol Table]. [Recursive Decent Parser].
- **Mini Games based on Backtracking**
  - Coded a **Crossword Solver** that takes a 10*10 grid and word list and outputs a grid with the words accurately filled
  - Coded a **Sudoku Solver** that takes a partially filled 9*9 Sudoku grid and outputs a solution so that every row, column and nine 3x3 sub-grids contains exactly 1 instance of the digits from 1 to 9. [Demo] **Source Code:** [Crossword Solver]. [Sudoku Solver].

TECHNICAL SECTION

DSA and Competitive Programming: Collection of problems,contests,exercies solved on various sites [Repository].
Programming Languages: Fluent in C/C++ & Python, Familiar with Java, Oracle SQL, Verilog,LaTeX,Linux Shell Scripting
Libraries & Frameworks:C++-STL **Java**-JavaFX GUI **Python**-Numpy, Pandas, Scikit-Learn, Keras, Tensorflow, PyTorch
Software familiarity: Matlab,GNS 3 Network Simulator,VirtualBox,Vm Ware,AutoCAD,Keil,Altera MaxPlus 2
Operating Systems: Linux-Ubuntu 18.04