Shantanu Sen Gupta

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shantanu-sen-gupta ShantanuSen Shantanu Sen Gupta

Education

Kookmin University **Mar. 2019 – Feb. 2021**
Master of Science in Electronics Engineering *Seoul, South Korea*
CGPA: 4.44/4.50

Khulna University of Engineering & Technology (KUET) **Mar. 2013 – Sep. 2017**
Bachelor of Science in Electrical & Electronic Engineering *Khulna, Bangladesh*
CGPA: 3.01/4.00

Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms Analysis
- Database Management
- Artificial Intelligence
- Internet Technology
- Systems Programming
- Computer Architecture

Experience

Korea I.T.S. Co. Ltd. **Mar. 2021 – Present**
Research Manager *Seoul, South Korea*

- Developed F/W and algorithm for ESP-32 based wearable wristband watch (IFWatch)
  1. Developed F/W for analog front end (AFE) of Analog Device and Maxim Integrated for PPG measurement
  2. Developed graphical user interface (GUI) application for heart rate (HR), respiratory rate (RR), blood oxygenation (SpO2), glycated hemoglobin (hbA1c) calculation with LVGL
  3. Developed F/W algorithm for HR, RR, SpO2, and HbA1c calculation
- Developed PC software using C# language for PPG data collection through WIFI
  1. Developed the F/W in IFWatch for sending PPG data to server through UDP protocol
  2. Developed PC software for receiving PPG data from client, plotting, and saving in CSV format
  3. Implemented cpp dynamic link library (.dll) in order to calculate HR, RR, SpO2, and HbA1c
  4. Implemented real time peak and valley detection of PPG signal

Kookmin University **Mar. 2019 – Feb. 2021**
Graduate Research Assistant *Seoul, South Korea*

- Innovative research idea generation, implementation, and publication
- Collaboration with research team to accomplish the project goal

BSRM Steel Mills Ltd. **May. 2018 – Feb. 2019**
Team Member Electrical *Chittagong, Bangladesh*

- Electrical maintenance of induction furnaces (IF), vibro chargers (VC), transfer trolleys (TT)
- Troubleshooting automated control system (software and hardware)

M.I. Cement Factory Ltd. (Crown Cement) **Jan. 2018 – Apr. 2018**
Assistant Engineer *Dhaka, Bangladesh*

- Electrical maintenance of vertical roller mil (VRM), induced draft fan (IDF), coal mill, and classifier fan
- Troubleshooting automated control system (software and hardware)

Projects

Gym Reservation Bot | *Python, Selenium, Google Cloud Console* **January 2021**

- Developed an automatic bot using Python and Google Cloud Console to register myself for a timeslot at my school gym.
- Implemented Selenium to create an instance of Chrome in order to interact with the correct elements of the web page.
- Created a Linux virtual machine to run on Google Cloud so that the program is able to run everyday from the cloud.
- Used Cron to schedule the program to execute automatically at 11 AM every morning so a reservation is made for me.

Ticket Price Calculator App | *Java, Android Studio* **November 2020**

- Created an Android application using Java and Android Studio to calculate ticket prices for trips to museums in NYC.
- Processed user inputted information in the back-end of the app to return a subtotal price based on the tickets selected.
- Utilized the layout editor to create a UI for the application in order to allow different scenes to interact with each other.

Transaction Management GUI | *Java, Eclipse, JavaFX* **October 2020**

- Designed a sample banking transaction system using Java to simulate the common functions of using a bank account.
- Used JavaFX to create a GUI that supports actions such as creating an account, deposit, withdraw, list all acounts, etc.
- Implemented object-oriented programming practices such as inheritance to create different account types and databases.

Technical Skills

Languages: Python, Java, C, HTML/CSS, JavaScript, SQL
Developer Tools: VS Code, Eclipse, Google Cloud Platform, Android Studio
Technologies/Frameworks: Linux, Jenkins, GitHub, JUnit, WordPress

Leadership / Extracurricular

Fraternity **Spring 2020 – Present**
President *University Name*

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
- Managed executive board of 5 members and ran weekly meetings to oversee progress in essential parts of the chapter.
- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.