

# Zuhaib Shakeel (Dahab)

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## Education

### Sungkyunkwan University

Suwon, South Korea

#### BSc in Computer Science and Engineering

Expected [02.2021]

- CGPA: 4.18/4.5
- Honors: High Academic Achievement Award, Dean's List Award and Merit based scholarship for 7 consecutive semesters.
- Relevant Coursework: Data Structures and Algorithms, Database, Computer Networks, System Programming, Compiler Design, Artificial Intelligence, Operating Systems, Computer Architectures, Digital Logic Design and Microprocessors.

### Jubilee High School

Amman, Jordan

#### High School Diploma / General Secondary Education Certificate Examination

[06.2013] – [06.2016]

- National Percentile rank: 97.49% (Among top 2.51%)
- Average: 94.3%

## Work Experience

### Very Large Databases Lab (VLDB)

Suwon, South Korea

#### Undergraduate Research Assistant (Intern)

[03.2019] – [Present]

- Improved Merge sort performance by 21% on Cosmos+ FPGA as compared to running the algorithm on Zynq's processor.
- Utilized loop unrolling and pipelining to keep the performance high while maintaining the memory to its original size.
- Created an interface between a host PC and an FPGA over PCIe which improved host PC coprocessing by 13%.
- Leveraged Knowledge in XILINX (Vivado, HLS, SDK), Xillybus Interface, Open-channel SSD, FPGA Programming.

### College of Engineering

Suwon, South Korea

#### Teaching Assistant at Sungkyunkwan University

[03.2018] – [Present]

- Courses: Electrical and Electronics Programming, Basics of Programming in C.
- Taught and supervised practical programming sessions in C- language. Responsible for grading assignments and exams.
- Consistently received positive evaluations from students and professor.

## Projects

### Review Analyzer and Recommendation System App

- Developed a RESTful web progressive app that crawls product reviews and generates an unbiased rating based on the importance of each review.
- Used Stanford NLP to filter the reviews to positive and negative followed by creating a ranking and a recommendation page.
- Utilized: Vue.js, Node.js, Ionic, Spring, Selenium, Stanford NLP, Hibernate and JPA.

### Emergency Notification and Volunteering Service App

- Developed an android app for sharing emergency notifications to refugees in real time.
- Connected the application to an Arduino via Bluetooth to send buzzer alerts in case of emergency.
- Won best Idea award in Taiwan-Korea workshop held in National Taiwan University.
- Utilized: Android Studio, Firebase, Google Sign-in API, Google Maps API, Arduino IDE, Tomcat, KakaoPay API.

### Myo Armband Sign-Language Translator

- Developed a novel technique for translating sign language using an enhanced version of dynamic random forest.
- Achieved an accuracy improvement of 13% over SCIKIT's random forest and 20% over SVM.

## Selected Publications

- Zuhaib Shakeel, SoonHyuk So, Patrick Lingga, Jaehoon Jeong, "MAST: Myo Armband Sign-Language Translator for Human Hand Activity Classification". The 11<sup>th</sup> International Conference on ICT Convergence. 2020.
- Zuhaib Shakeel, Dungeyeon Kim, Sungyoun Seo, Seunghun Shin, Min Jang, Sang-won Lee. "SSD Map Viewer: An Analysis Tool for SSD Fragmentation". Korean Database Conference. 2019.

## Skills and Interests

- **Programming languages**: C, C++, Java, Python, JavaScript, CSS, HTML, Verilog.
- **Operating Systems**: Windows, Linux, Android.
- **Database Systems**: SQL, SQLite.
- **Software/ Applications**: Android Studio, XILINX (Vivado, HLS, SDK), PyTorch, TensorFlow, Keil IDE, Photoshop.
- **Hardware**: FPGA, Arduino, BIG8051.
- **Communication skills**: English, Urdu, Arabic, Hindi, French (Beginner), Korean (Intermediate).
- **Personal skills**: Considerate for teamwork, Strong decision maker, Time management, Resilient in working with diversity.
- **Interests**: Web Designing, Machine Learning, Computer Vision, Game Development, Card Tricks.