Khadija Hafeez

https://khadijahafeez.github.io/
LUMS, MS, Pakistan

Qualification Summary

- 3+ years of experience working on data analytics, software development, and design systems.
- Proficient programmer with 4+ years experience developing robust code for R&D projects.
- Spearheaded teams on R&D projects yielding research articles in top ACM journals and conferences.

Education

- **Master of Science in Computer Science** (2015 - 2017)
  SBASSE, Lahore University of Management Sciences
  CGPA: 3.33/4

- **Bachelors of Engineering in Software Engineering** (2010 - 2014)
  NUST School of Electrical Engineering and Computer Science, Islamabad
  CGPA: 3.51/4

Academic and Research Experience

- **Lahore University of Management Sciences** Lahore, Pakistan
  Teaching Assistant - Intro to Computer Programming - CS-200 *Spring 2016*
  Research Associate, Team Lead – IoT and Data Analytics *Fall 2016*

  - **Algorithm Development:** Designed and implemented robust algorithms for various platforms. (C,Python)
  - **Data Collection:** Designed cost-eff ective sensing and control platform using sensors, Z-wave based smart plugs, and Raspberry Pi to collect temperature, humidity, and power values inside homes over year long period (C)
  - **Data Visualization:** Used plotly, ggplot2 libraries to plot data to identify behavioral patterns, highlight key findings, and produce publication quality graphs (R)
  - **Technical Writing:** Contributed in writing system design, algorithm, evaluation methodology, and result analysis sections of the research papers accepted at ACM conferences and journals (LaTeX)

- **NUST School of Electrical Engineering and Computer Science** Islamabad, Pakistan
  Teaching Assistant - Object Oriented Programming with C++ Fall 2013

Projects

- **Hawadaar:** Retrofitted HVAC system for personalized comfort that provides centralized control abstraction to efficiently air-condition traditional buildings, lacking HVAC, using distributed legacy devices such as heater and AC units.
- **CrowdFeed**: A location-aware context-sensitive crowd sourcing platform to help people utilize their spare time efficiently and enjoyably by performing assigned tasks on their mobile phones and gain some reward, discount or non-monetary benefit in return. The captured context helps context-aware experience sampling from the right person at right place and right time for the benefit of both task performer and task giver.
- **LearnQuran:** An educational web application for providing a better understanding of the morphological and lexical analysis of Quranic Arabic and its various colloquial parts of speech. We used the technique called total physical interaction (TPI) to ensure quick learning of the language in a comprehensive manner. *(Third Prize in NUST-SEECS Open House,2014)*

Publications

- **K Hafeez**, Yasra Chandio, A Bakar, A Ali, AA Syed, TM Jadoon, MH Alizai: "Inverting HVAC for Energy Efficient Thermal Comfort in Populous Emerging Countries", ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), 2017. Best Paper Award (Audience Choice)

- S Abbas, A Bakar, **K Hafeez**, Yasra Chandio, A Ali, TM Jadoon, MH Alizai: "Inverted HVAC: Saving the World, One Building at a Time", under review at ACM Transaction on Sensor Networks (TOSN)

Technical Skills

- Operating Systems: Raspbian, Linux
- Tools: Latex, Illustrator, Photoshop
- Framework: Django, AngularJS, MVC
- Languages: C/C++, Python, Java

Scholastic and Other Achievements

- Audience Choice Best Paper Award at ACM BuildSys'17
- Third position in Final Year Projects Open House at NUST (2014)
- Merit Based Scholarship for three semesters in BE-Software Engineering
- Letter of Appreciation on responsible position as a Class Representative (2013)

Relevant Courses

- Big Data
- Distributed Computing
- Advanced Algorithms
- Advance HCI

Professional Experience

- Full Stack Developer with hands on experience on python MVC framework, Django as backend system development and MVC framework for JavaScript, AngularJS as Frontend GUI development (June 2017 – Present)