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Shahid Khaliq

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Employment

Graduate Research Assistant **University of Waterloo, Canada** **Sep 2017 – Present**

Data Systems Group (Prof. Semih Salihoglu)

- Researching hypergraph processing systems and databases.
- Researching graph query optimizations for Graphflow (http://graphflow.io).

Software Engineer **APIMatic Ltd, Pakistan** **Jun 2016 – Aug 2017**

Backend Team Lead

- Re-architectured, extended and maintained APIMatic's code generation engine in .NET.
- Added support for automatic generation of Python and Ruby client libraries, test code and documentation from popular API specification formats like OpenAPI Specification and API Blueprint.
- Implemented all four grant types of the OAuth 2.0 authentication protocol in APIMatic's Python and Ruby client libraries.
- Added support for continuous integration tools (Travis, Circle, Appveyor and Jenkins) to these client libraries.

Software Engineer, Intern **APIMatic Ltd, Pakistan** **Feb 2016 – May 2016**

- Added support for Python 3 in APIMatic's code generation engine in .NET.

Software Engineer, Intern **BITSYM, Pakistan** **Feb 2015 – May 2015**

- Implemented Software Defined Networking algorithms at the ISP end to reduce average access latency for frequently accessed online content using the OpenDaylight controller and OpenFlow protocol.

Education

MMath Computer Science **University of Waterloo, Canada** **Sep 2017 – Present**

- Cumulative GPA: N/A

B.E. Software Engineering **NUST, Pakistan** **Sep 2012 – Jun 2016**

- Cumulative GPA: 3.62 / 4.00

Relevant Courses:

- Distributed Systems
- Database Systems
- Operating Systems
- Computer Architecture
- Computer Networking
- Computer Vision

Selected Projects

- **Collaborative VR Editing:** A motion controlled virtual reality scene creation and model editing platform with support for real-time collaboration among multiple designers written in C# using Unity. (Video)
- **KVStore:** An RDMA-based distributed shared memory key-value store written in C++.
- **Stanford PintOS:** A thread scheduler for the PintOS operating system written in C.
- **Mulprox:** A multilayer peer-to-peer proxy written in Java.
- **Reliable UDP:** An application layer protocol written in Python which enabled reliable data transfer over UDP.

Additional Experience and Awards

- **Teaching Assistant:** Introduction to Computer Science (UWaterloo), Data Structures and Algorithms (NUST), Design and Analysis of Algorithms (NUST)
- **NUST Entrance Scholarship:** Awarded to the top 150 candidates (0.5%) among about 30,000 applicants in the nationwide NUST entrance test.

Technical Skills

- C/C++, C#, Java, Python, Ruby/Rails, SQL, Docker, Android, JavaScript/NodeJS, HTML/CSS
- Unix, Code Generation, Kernel Programming, Networking, Graph Databases, Continuous Integration