Othmane Rifki, Ph.D.

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Summary

Data scientist with 7 years experience and in-depth understanding of analytic methods and their implementations. Performed statistical analysis of large datasets processed with large-scale distributed computing systems. Designed and implemented scalable analytic solutions using numerical libraries, programming frameworks, and specialized code.

Skills

- **Programming:** Analyzed and visualized high-value datasets with software packages developed in multiple languages
  - 7+ years of data analysis and visualization using **Python**, **C/C++**, Bash
  - 2+ years of machine learning using **pandas**, **scikit-learn**, **TensorFlow**, **OpenCV**
  - 7+ years of large-scale computing using LHC Grid, Open Science Grid, Mira Supercomputer, HTCondor
  - 7+ years of contributing to sizable projects using distributed version-control systems (**git**)
- **Leadership:** Led several scientific groups to achieve time-critical targets
  - Managed teams of **5-20 researchers** leading to several **peer-reviewed** journal publications
  - Supervised **3 PhD, 1 Master's students** with two successful thesis defenses to date
  - Organized and chaired weekly meetings and delegated tasks with emphasis on individual strengths
- **Communication:** Excelled in written and verbal communication skills
  - Published **13 scientific papers** in peer-reviewed particle physics and instrumentation journals
  - Presented the latest scientific advancements in particle physics at **25 notable international conferences**
  - Summarized research and data analysis to non-technical audiences at various **outreach activities**
- **Languages:** English (fluent), French (fluent), Arabic (fluent), German (basic)

Experience

Deutsches Elektronen-Synchrotron (DESY) — **Germany**
Post-Doctoral Research Fellow — *2017–Present*

- Performed likelihood-based statistical analyses on a petabyte-scale dataset, using predictive modeling algorithms
- Automated pick-and-place assembly with robotics and advanced optics to achieve **micron level precision**
- Achieved **high accuracy pattern matching** using computer vision algorithms in challenging conditions
- Administered a laboratory budget of **300k Euros** coordinating a team of scientists, engineers, and suppliers

European Organization for Nuclear Research (CERN)) — **Switzerland**
Doctoral Researcher — *2015–2017*

- Designed real-time data processing algorithms with strict real-time performance to process 160 gigabytes/second
- Supervised a team of 10 scientists to ensure high-quality data recorded by the ATLAS detector at CERN

Argonne National Laboratory (ANL) — **United States**
Research Fellow — *2014–2015*

- Won a US level Analysis Support Center fellowship awarded to 2 students a year to work with ANL scientists
- Simulated complex particles production and interaction using IBM Mira, one of the world's fastest supercomputers

Education

University of Oklahoma — **United States**
Ph.D. in High Energy Physics — *2012–2017*

Drexel University — **United States**
B.Sc. in Physics with High Honors — *2009–2012*

Activities

- **Triathlon:** Competing in the Hamburg Landesliga in the 2018 and 2019 seasons
- **Diving:** CMAS 3 star diver with TDI advanced nitrox certification