AMIN KARBAS
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EDUCATION

9/2021 - Present **UNIVERSITY OF CALIFORNIA, SANTA CRUZ**   Santa Cruz, CA
Ph.D., Computer Science and Engineering
- Focus: Applied Cryptography

9/2016 - 7/2021 **SHARIF UNIVERSITY OF TECHNOLOGY**   Tehran, Iran
B.S., Computer Science
- GPA: 3.7/4.0
- Coursework: Operating Systems, Parallel Programming and Architecture, Computer Networks, Data and Network Security, Distributed Systems and Blockchains, Bioinformatics, Image Processing
- Voluntary member of the Sharif Green Society, advocating for environmental protection
- Voluntary organizer of seminars in the scientific chapter of the Mathematics and Computer Science department

EXPERIENCE

8/2020 - 12/2020 **MAX PLANCK INSTITUTE FOR INFORMATICS**   Saarbrücken, Germany
Research Intern
- Collaborated with Dr. Oliver Gasser in Prof. Anja Feldmann's research group
- Investigated the impact of changes in TLS certificate lifetime requirements enforced by user-agents
- Designed a pipeline to collect and stay up to date with Certificate Transparency Logs' data
- Analyzed 11B records from all available Certificate Transparency Logs
- Accumulated 5 billion TLS certificates for further active measurements
- Voluntary member of Max Planck Society Mental Health Collective

7/2018 - 5/2021 **SOTOON (CAFEBAZAAR CLOUD)**   Tehran, Iran
Data Infrastructure Engineer
- Built the platform to transfer, store, and analyze big data at petabyte scale for multiple user-facing apps with 84M+ active users across Android, iOS, and web
- Researched and provided strategic recommendations for solutions architecture including Apache Druid for OLAP and Presto for SQL on Hadoop
- Set up and/or maintained Apache {Druid, Kafka, Hadoop, Spark, Zeppelin, ZooKeeper} and M3DB clusters/services; Designed currently running probers and high-accuracy billing systems for them
- Scaled the storage cluster from 10s of terabytes to petabytes (100x)
- Developed Kubernetes operators to manage Apache {Kafka, Hadoop, ZooKeeper} clusters in a Platform as a Service environment
- Created mentorship documents and mentored new team members

2/2018 - 9/2019 **GOJESABZ BIG DATA**   Tehran, Iran
Machine Learning Engineer
- Developed a deep learning-based Farsi image-to-text (OCR) pipeline

7/2017 - 9/2017 **SAHAB PARDAZ**   Tehran, Iran
Data Engineering Intern
- Developed a distributed and highly available web search engine indexing millions of websites
- Developed and maintained a document index/fetch wrapper for ElasticSearch

ADDITIONAL INFORMATION

TECHNICAL SKILLS
- **Proficient in** Docker, Kubernetes, Apache {Druid, Hadoop, Kafka, Zeppelin, ZooKeeper}, HashiCorp Nomad, GoLang, Python, GNU/Linux, Git, LaTeX
- **Experienced with** Apache Spark, Java, Scala, HashiCorp Vagrant, Prometheus, M3DB, PostgreSQL, Google {Docs, Sheets, Slides}

INTERESTS
- **Research Interests include:** Applied Cryptography, Operating Systems, Architecture, Storage/File Systems, Distributed/Cloud Computing, Security
- **General Interests include:** Mountain Biking, Dancing, Mental Health Awareness, Gender Equality, Environmental Protection, Distributed and Scalable Software