

Kasra Ahmadi, Ph.D.

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Education

- University of South Florida, Tampa; **Ph.D. in Computer Science**; Dec 2021 to Dec 2024; GPA: 3.93/4
- Amirkabir University of Technology, Tehran; M.Sc. in Information Technology; Sep 2018 to Sep 2021.
- Isfahan University of Technology, Isfahan; B.Sc. in Computer Science; Sep 2012 to Jul 2017.

Skills

- **Data** Airflow, Kafka, Pandas, Kinesis, PowerBI, Postgres, MongoDB
- **Programming** Python (2 years), C, C++, Typescript, Node.js, Java, JavaScript, Bash, QT, QML, SQL
- **Cloud** S3, EC2, DynamoDB, Aurora, CDN, Load Balancer, IAM, CloudFormation, BigQuery
- **IoT** Vitis, ARM Cortex-M4, FPGA, Stm32, Raspberry Pi, AVR, Arduino
- **Others** Git, Docker, Jira, GraphQL, Rest API, Wireshark, Selenium, Postman, Webservice

Work Experience

- **University of South Florida**, Tampa, US Dec 2021 - present
Research Associate
Designed, simulated, and implemented Algorithm Level Error detection schemes for Elliptic Curve Cryptosystems and NTT operation, achieving an almost perfect error detection rate of nearly 100% with less than 3-5% additional overhead.
Performance assessment of PQC schemes e.g. Kyber on lightweight IoT.
Work under National Science Foundation (NSF) Grant # [1801488](#);
Teaching assistant of graduated Operating Systems, Network Lab, and System Design Lab.
- **Goki**, Sydney, Australia May 2021 - Apr 2022
Business Intelligence Analyst
Developed **Interactive dashboards** using **PowerBI** illustrating Real-time functionality of the hotel's smart lock system.
Perform ETL operation on user application data, sourced from **Google analytics** and **Databases** destined in **BigQuery**.
Conducted **Data analyses** to assist managers in making **data-driven decisions** focusing on **sales** and **marketing** team.
- **Paar Lift**, Tehran, Iran Jan 2020 - Sep 2020
Data Analyst
Analyzed optimal floor levels for elevators at specific times to reduce passenger wait times using machine learning, such as Logistic Regression and KNN. Utilized data-driven approaches to enhance elevator efficiency and passenger experience.
Establishing a connection between Raspberry Pi embedded boards and elevators through the CAN bus protocol for the real-time data transfer of elevators to a Linux-powered IoT.
Building **ETL pipelines** by using **Apache airflow** to extract, ingest, and load elevator traffic data to an OLAP storage.
Performing **Data visualization**, **big data** analytics and **statistical modeling** on elevators traffic data.
We decreased hotels passengers' waiting time by 27%, equating to a time savings of 11 seconds per passenger. [Project's demo](#).
- **Dodong**, Isfahan, Iran May 2017 - Dec 2019
Software Engineer
Managed a 4-member cross-functional (Frontend, Design, UAT, Mobile) team and coordinated with two business partners toward the successful launch of a realtor platform. Perform API development and **RDBMs management**.
Task assigning and project management using agile framework, scrum and Jira.

Certifications

- **AWS Certified Solutions Architect - Associate**, [View Certification](#) (Dec 2023)
- ETL and Data Pipelines with Shell, Airflow and Kafka, [View Certificate](#) (Jan 2024)
- Divide and Conquer, Sorting and Searching, and Randomized Algorithms, [View Certificate](#) (Oct 2023)

Projects

- **Distributed File Sharing Market Based on Blockchain**: Deployed a web3 application for a file-sharing marketplace, leveraging the IPFS and Ethereum smart contracts.
- **Secure Microcontrollers Remote Programmer**: Developed and designed a **QT/QML** application along with a server API using Node.js to enable programming of Microchip microcontrollers remotely while preserving the company's Hex files confidentiality.
- **GPS Car Tracker**: Utilized STM32 and ArduinoIDE for the hardware implementation. Additionally, Node.js was employed for the server API.
- **Android Game published on Google Play**
Designed and developed an online Trivia Android game (Footxam) by using **Java** and **Node.js**.