Mohammad Salar Arbabi

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RESEARCH INTERESTS

⋄ Blockchain Technology

⋄ Smart Contracts

⋄ Distributed Systems

⋄ GDPR

EDUCATION

⋄ **PhD. Research Fellow** Sept. 2019 – Sept. 2022 (expected)
Department of Informatics (IFI), University of Oslo (UiO), Oslo, Norway

· **Thesis**: Secure and Accountable Managing and Sharing of Medical Records Using Smart Contracts and Blockchain

⋄ **M.Sc. in Information Technology Engineering with specialization in Electronic Commerce** Sept. 2016 – Jan. 2019
Department of Computer Engineering and Information Technology (CEIT)
Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran

· **Thesis**: Incentivized and Decentralized Delivery Network of IoT Updates Based on Ethereum Smart Contracts and Blockchain technology

⋄ **B.Sc. in IT Engineering** Sept. 2011 – June 2016
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran

· **Project**: Cloud Assisted IoT-Based Social Door to Boost Student-Professor Interaction

PUBLICATIONS

⋄ **Decentralized and Secure Delivery Network of IoT Update Files Based on Ethereum Smart Contracts and Blockchain Technology**
MohammadSalar Arbabi and Mehdi Shajari
Submitted to *IEEE Communications Surveys & Tutorials* May 2021

⋄ **Decentralized and Secure Delivery Network of IoT Update Files Based on Ethereum Smart Contracts and Blockchain Technology**
MohammadSalar Arbabi and Mehdi Shajari
Accepted in *CASCON 2019*

⋄ **Cloud Assisted IoT based Cyber-Physical Door to Boost Student-Professor Interaction**
Ali Asghar Nazari Shirehjini, Abdulsalam Yassine, Shervin Shirmohammadi, *MohammadSalar Arbabi* and Ramtin Rassoli
Accepted in *HCI International 2016*

⋄ **Bug Localization Improvement Using The History of Authors**
Hamed Tahmooresi, Abbas Heydarnoori, Jafar Habibi, Ramtin Rasooli and *MohammadSalar Arbabi*
Accepted in *CSICC2016* (The 21st International Computer Society of Iran Computer Conference) (in Persian)

RESEARCH EXPERIENCE

⋄ **Ph.D. Fellow at *UiO-Blockchain* laboratory** Feb. 2017 – Jan. 2019
Supervisor: *Professor Roman Vitenberg*

⋄ Researching within SMARTMED project on how to exploit blockchain technology and smart contracts to enhance healthcare systems

⋄ **Research Assistant in *Information Security and Electronic Commerce (ISEC)* laboratory** Feb. 2017 – Jan. 2019
Supervisor: *Dr. Mehdi Shajari*

⬥ **Thesis**: Incentivized Distributed and Decentralized Delivery Network of IoT Updates Based on Ethereum Smart Contracts and Blockchain technology

– Implementing the idea of decentralized architecture to update IoT devices via a blockchain-based distributed framework within Ethereum smart contracts. The proposed framework consists of a front-end application, a couple of smart contracts to deploy on Ethereum blockchain network and a Distributed Storage Network (DSN) which is comprised of P2P connected IoT nodes acting as full Ethereum nodes that will be financially compensated in micro-payments, as incentives to share the content.

⬥ **Researcher at *Fintech Research Center***   Feb. 2017 – Jan. 2019
Supervisor: *Dr. Mehdi Shajari*

⬥ The AmirKabir University of Technology Technology Research Center (Fintech) was established in 2017 to serve national industry and to strengthen industry-university interactions as well as move to the third-generation university at the Department of Computer Engineering and Information Technology. The scope of Fintech's activities are areas that either directly or indirectly are related to the field of financial technology.

⬥ **Research Assistant in *Ambient Intelligence* laboratory**   Jan. 2015 – July 2016
Supervisor: *Dr. Ali Asghar Nazari Shirehjini*

⬥ **Thesis**: Cloud Assisted IoT based Cyber-Physical Door to Boost Student-Professor Interaction

– Design and implementation of a Cloud-Assisted Internet-of-Things Based Cyber-Physical Door to Boost Student-Professor Interaction. Our aim is to make a network of doors, each of which has its own identity and can provide the visitors with necessary information and services in the absence of the door's owner.

⬥ **Member of *Automated Software Engineering* laboratory**   Summer 2015
Supervisor: *Dr. Abbas Heydarnoori*

⬥ **Project**: Bug localization and learning to rank relevant files for bug reports, using domain knowledge and git repository records.

⬥ **Member of *Smart Appliances* laboratory**   Sept. 2014 – Jan. 2015
Supervisor: *Dr. Maziar Goudarzi*

⬥ **Project**: *Padra*, a vehicle tracking system for Android smart phones.

– Developing new or improved systems using various smart appliances including, but not limited to, smart phones, smart TVs, and mobile telecommunication infrastructure targeting quality of life, environment protection, and new business opportunities.

HONORS AND AWARDS

⬥ **Ranked 1'st** based on GPA, in M.Sc. students of Department of Computer Engineering and Information Technology of AmirKabir University of Technology (Tehran Polytechnic) with CGPA of 19.73/20.   February 2018

⬥ **Ranked 6'th** among 30,000 students in the annual National University Entrance Exam (a.k.a "Konkoor-Arshad") and got **admission to AmirKabir University of Technology (Tehran Polytechnic)**. Tehran Polytechnic is one of the top schools in the region and one of the top 400 leading schools around the globe and has elevated to the status of Center of Excellence in computer engineering and information technology over the years.   September 2016

⬥ **Ranked 67'th** among 500,000 students in the annual National University Entrance Exam (a.k.a "Konkoor-Karshenasi") and got **admission to Sharif University of Technology (SUT)** which is the university of choice for the top ranking students attending the nationwide universities entrance exam   September 2011

TEACHING EXPERIENCE

⬥ **Teaching Assistant**

⬥ **University of Oslo (UiO)**

– Distributed Systems   Fall 2021

⬥ **Sharif University of Technology (SUT)**

– Fundamentals of Programming (C)   Fall 2013, Spring 2014
– Advanced Programming in Java   Fall 2014, Spring 2015

– Fundamentals of Information Technology	Spring 2014
– Operating Systems	Fall 2014

⬦ **AmirKabir University of Technology (Tehran Polytechnic)**

– Electronic Marketing	Fall 2016
– Information Technology Strategic Planning (ITSP)	Fall 2018
– Operating Systems Laboratory	Fall 2018
– Electronic Payment Systems	Spring 2018
– Applications of Social Networks Analysis in Electronic Commerce	Spring 2019
– Supply Chain Management	Spring 2019

⬦ **Instructor of *Ethereum and Smart Contract workshop***   Feb. 15, 2018
In *Fintech Research Center*, Supervisor: *Dr. Mehdi Shajari*

· The first Ethereum and Smart Contract workshop to be held in Iran to teach Blockchain and Ethereum technology principals and Solidity Turing-complete contract-oriented programming language to encourage business corporations and application developers towards decentralization and control mechanism distribution by means of Ethereum smart contracts in order to settle financial contracts automatically.

⬦ **Teaching Android at *Smart laboratory***   Summer 2015 – Fall 2016
We intend to guide freshman students and prospective lab members to learn basic standards of mobile applications and to help them develop their ideas.

INDUSTRIAL
EXPERIENCE

⬦ **Developer at *Arsh***   Summer 2015
Working as a senior Android developer for summer internship.

⬦ ***Grape Fruit***

– Android smart phone application to ensure devices' security and prevent malicious software security attacks.

SKILLS

⬦ **Programming**

· ***Proficient***: Java(native), Solidity

· ***Familiar With***: C, C++, Python, Android Development, Objective-C, Matlab, Assembly (IBM360, Intel-8086), Verilog

· ***Web/DB***: HTML, CSS, SQL, JavaScript, Node-JS, Django framework, Web-3, Truffle framework, Drizzle, Hadoop

⬦ **Methodologies**: Scrum, XP

⬦ **Tools**: Eclipse, IntelliJ, Android Studio, JIRA, Git, XCode, Adobe Photoshop, LaTeX, Gephi, Pajek, CPN-Tools, Weka, Magento, Ganache, Remix, CORBA, Peersim, Spread

⬦ **Operating Systems**: Mac OS, Windows, Linux

LANGUAGES

⬦ Persian (Native)

⬦ English (Fluent)

⬦ Norwegian (Elementary)