

Ahmad Ronaghikhameneh

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Education

Politecnico di Milano, School of DEIB	MILAN, ITALY
M.Sc. in Computer Science and Engineering - Communication and Society Engineering	2015 – 2018
Dissertation: User-centric Data Visualization Evaluation.	
University of Tehran, School of Electrical and Computer Engineering	TEHRAN, IRAN
B.Sc in Information Science and Technology	2008 – 2014
Thesis: Behavior Analysis and Mood Detection in Persian Tweets	

Professional Experience

Sharif Policy Research Institute MAY 2018 - PRESENT

Open Data Strategy and Value Co-Creation Researcher @ Electronic Authentication in Judiciary's Notice and Registration System

For using electronic services of Judiciary, Iranians need to be authenticated. This was done by going by person to some special offices.

The challenges of old-fashioned manner were 1- limitation of such offices 2- quality and speed 3- Covid-19 and the importance of offering services electronically.

We solved this with a co-creation value model design. We first gathered main AI-based companies which provided electronic authentication based on image, voice, and personal documents. We then designed a data governance guideline for the Judiciary to how to share data. We also designed a revenue-sharing model. Moreover, we designed a monitoring system for quality assurance.

Currently around 9 companies offer this public service with lower price, real-time process, and higher quality. Moreover, people don't need to visit offices by person.

Open Data Strategy Researcher and Data Analyst @ Iranian Social Welfare Database (G2B, G2G)

Iranian Social Welfare Database is an Open Data Platform for the Ministry of Cooperatives, Labour, and Social Welfare in Iran. They offer several public services based on this database ranging from direct financial help to health support.

There were three issues, which our team was involved in improving.

×× First, they didn't have a data map and strategy to prioritize what they want, acquire them, and make them open.

×× Second, they didn't have enough budget to clean the data, maintain it, and make it ready for several services, and offer new public services.

×× Third, they need an ML-based model to find appropriate families for welfare programs dynamically.

I have been involved in both phases.

1,2- Based on best practices of Data Strategy Setting by Rand Corporation, in-depth interviews with the internal and external stakeholders, and the organization's vision and missions, I've designed an Open Data strategy and map for them. Within this document, the data sources, way of getting data (with API or not!), and methods of making it open were designed and described. Moreover, I went through designing a data-driven PPP and a new value creation model.

3- I conducted meetings with focus groups and stakeholders representatives to find essential data fields for the means test. After solving missing data problems, I also ran a means test and applied unsupervised learning techniques to this data set. I designed avrtech.ir for experts' crowd-tagging for supervised learning. We proposed an AI-powered scoring mechanism to determine if a family is a good target for the welfare program. A social scientist, an economist, and a full-stack developer, and a policy analyst were my teammates in the project.

My Roles: Team Management, Data Analysis, Data Governance Design, Business Model Design

Best Practices: Rand Corporations' Data Strategy Models, CRISP-DM

Technologies: Python Pandas and NumPy, MySQL

Methods: Clustering (K-means, dbscan), Crowdsourcing for crowd-tagging, Linear Regression (RandomForest, XGBoost), Focus Group, In-depth Interview

Value Co-creation Researcher and Data Analyst @ Parental Control Service in Satra (G2G, G2B)

Satra is the regulatory body in the Online Audiovisual Industry in Iran.

1- We approached to make a plan for smart data use based on Satra's services, organization architecture, and value model. I've been involved in designing a data strategy model.

I then applied CRISP methodology for prioritizing the data they gather and match them with the primary processes within the organization. I finally developed a dashboard based on 1st-level data for accelerating data-driven decision making. We did this project in a team consisting of a business analyst, a Reg-Tech researcher, and I.

2- Moreover, one of Satra's duties according to public value is regulating Online Audiovisual Platforms for Parental Control issues. We researched and made a co-creation model, which private companies produce the needed service instead of Satra itself. This is made based on revenue sharing. Currently, 4 companies are providing this service.

My Role: Business Analyst, Data Analyst, Data Governance Researcher

Technologies: CRISP-DM, Grafana, Python, Rand Corporation's Data Strategy Best Practices

Open Data Researcher and Data Visualization Specialist @ Iran Migration Data Portal (G2C, G2B)

Iran Migration Data Portal is an open data platform. I've participated in the product design phase, and I also did some technical part of the project. (A 1-min video of this platform is accessible by the Link)

My Role: Product Designer and Developer.

Tools: Product Design, JavaScript, Grafana

Crowdsourcing and Data Visualization Specialist @ Gasoline Quota Exchange Platform

Iran's gasoline subsidies in recent decades have been highly inequitable, ineffective, and inefficient. I have analyzed an alternative approach of giving every Iranian their own gas quota and allow free market trade between individuals for their surplus.

I designed, developed and analyzed *EnergyYar.com*, a policy intervention simulation platform, that allows Iranians to enter their household information and calculate their financial gain if such a policy was implemented. This platform had reached more than 700,000 Iranians mainly through social networks resulting in 15,000 data entries. Encouraged by early evidence of success, we have built an MVP for a gas quota exchange platform.

* My work and the idea were covered by the *Middle East Institute* in Dec 2019 as an effort to educate the public and raise awareness and transparency.

My duties: Policy Analysis, Game-theory based Analyst, Team Leadership

Tools: PHP, HTML and CSS, Java for Telegram bot

Fields of Interests

Open Data Ecosystem, Data Governance, Data Analytics, Value Co-Creation Models, Digital Government, GovTech, Disruptive Technologies

Publications

Data for Policy

LONDON, UK (HELD ONLINE DUE TO COVID-19)

Payande, Imad al-Din, Ronaghikhameneh, Ahmad, Mirzapour, Hossein. (2020). Local Regulation of Global Digital Platforms; How AI Algorithms Change the Borders in the Age of Data

I've presented it in *GovTech* session. The presentation is available @ <https://youtu.be/0Pey0X5N9-M> while the article can be found <https://zenodo.org/record/3968963>.

Social Sciences and Humanities Open Journal

Payande, Imad al-Din and Ronaghikhameneh, Ahmed and Mirzapour, Hossein. (2020) There Must Be a Culpable Behind the Scenes; a Novel Trend in Misinformation Diffusion During the COVID-19 Pandemic

Under review (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3596049)

Research and Development Tools

Research Methods: Classification, Clustering, Network Analysis

Qualitative Research Methods Focus Group, In-depth Interview, Case Study, Stakeholder Analysis

Soft Skills

× **Product Design and Management - from Idea to Market**

× **Team Leadership and Management** I built a team of 14 postgraduate professionals from various academic backgrounds to create a multidisciplinary team. I conducted interviews, hired, managed and motivated to deliver on product, research and analysis outcomes. Turning a research and development project to several clear deliverables with milestones and scrum-based project management were my other duties.

References

Danilo Ardagna, PhD Associate Professor, Department of Electronics, Information and Bioengineering, Polytechnic University of Milan ×× Email: danilo.ardagna@polimi.it

Morteza Zamanian, PhD Assistant Professor, Assistant Professor of Economics at Amirkabir University of Technology ×× Email: mo.zamanian@aut.ac.ir

Sara Comai, PhD Associate Professor, Department of Electronics, Information and Bioengineering, Polytechnic University of Milan ×× Email: sara.comai@polimi.it