Frederic Ayala Gomez

EIT Digital Budapest DTC

PhD topic: Mining the social media

PhD supervisor: Dr. András Benczúr, SZTAKI

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'The EIT Digital provided me with valuable insights into how to set priorities and execute tasks. It helped me to validating my value proposition and business model as soon as possible. This saved time and money, and I've got immersed with my potential customers.'

Achievements & further plans

During my first three semesters I have been learning about **Data Mining, Algorithms, Data Structures and Semantic Web**, and particularly, how these topics are **applied on Recommender Systems**.

With my supervisor Dr. András Benczúr and other fellows from the MTA SZTAKI DMS group we got the 2nd place at the RecSys Challenge 2014. We also presented a poster at the ICCSS 2015 in Helsinki. I attended the RecSys 2015 in Vienna. In the coming year we expect to have a couple of publications in International conferences.

I am the co-founder of Inside-Out Analytics (ioa.mx). We help companies with acquiring leads and retaining customers. We do this by applying data mining, recommender systems, web crawlers and content marketing. In 2016, we signed our first contracts in Mexico with car dealerships from different brands (i.e. Toyota, VW, Seat and General Motors).

Educational status at Spring semester of 2016:

RA	OR	BMD	GH	Mobility	BDExp.
✓	✓	⚙	✓	⚙	⚙

Reserach topic

My research focuses on the application of Data Mining to the Social Media (e.g. Social Networks, Blogs, News, Content Providers). The main focus is on those algorithms that are able to find relevant items to the users. Recommender Systems are essential for organizations that want to personalize the content that is consumed by their users.

Good recommendations lead to higher engagement (e.g. buying products, watching videos, listening to songs). Current research has paid special attention to representing the users-items relations in a lower dimension (e.g. matrix factorization). These methods perform well when the user profiles are extended and the items do not expire quickly.

However, new approaches are required for algorithms to perform well when there is limited information about the user (e.g. unknown user) and the items expire quickly (e.g. news, promotions).
By this point, I have been doing literature reviews and implementing algorithms for item-to-item recommendations..