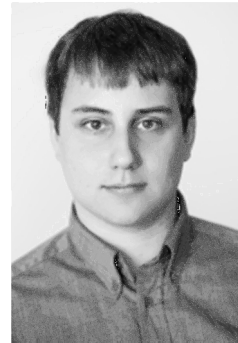


# Balázs Hidasi

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## Work experience

**2010. January – present**

**Gravity Research and Development Inc.**

*Head of Data Mining and Research*

*2015. January – present*

As the leader of the data science team, I am responsible for research and data mining activities in Gravity. I coordinate the team's and also conduct my own research in the field of machine learning and data mining. The research revolves around (1) developing advanced recommender algorithms to make Gravity's recommender engine even better; and (2) exploring new fields and application areas for recommender systems. I also coordinate and consult data mining projects (e.g. data analysis, POCs) within the company.

*Data Mining Researcher*

*2010. January – 2015. January*

I joined the Gravity R&D team in January 2010 as a datamining researcher. My main responsibilities were research and data analysis. The research revolved around developing new, intelligent machine learning algorithms that could give more relevant/efficient recommendations. Experimentation with recommendation algorithms also included determining the circumstances in which a given algorithm can be used efficiently. Customer data analysis reveals the behavior of the users of the customer and makes us able to select the most efficient algorithms and parameterizations for the given recommendation problem. Another part of this task was monitoring the efficiency of the live recommendation system and modifying the algorithms based on the feedback, if necessary. I was also responsible for implementing the well-tried algorithms from my research into the recommendation engine of Gravity.

**2015. June – 2015. September**

**Telefónica I+D**

As part of a research collaboration between Telefónica I+D and Gravity R&D in the CrowdRec project, I spent three months at TID in Barcelona. During this time, we laid the foundations for a longer research project that aims at developing the next generation of recommender algorithms using advanced machine learning techniques.

**2013. November – present**

**CrowdRec project**

CrowdRec is an EU FP7 funded research project that aims to create the new generation of recommender systems. In order to enhance current systems, the project focuses on context-awareness, interactivity, scalability, stream recommendations and on creating symbiosis between users and the system so the users will provide relevant information to the system and will get better service as a result. The consortium partners are: Technical University of Delft, Technical University of Berlin, Gravity Research & Development Zrt, Moviri, Telefónica I+D, Tuenti, Xing. The project is coordinated by JCP-Connect.

**2008. January – 2011. September**

**ShiftTree algorithm (research)  
at DmLab (BME-VIK, TMIT)**

Individual research project in which I created and examined a novel, model-based time-series classifier algorithm, coined ShiftTree. During the research I was affiliated with DmLab (led by Csaba Gáspár) at the Department of Telecommunications and Mediainformatics (TMIT) at the Budapest University of Technology and Economics (BME).

## Teaching experience

**2011-2014 (every semester)**

**Lectures on recommender systems**

As part of various bachelor and master courses at BME-VIK TMIT, mainly in "Tartalomelemzés" (Content analysis) and "Media and Text Mining" courses.

**2011-2014 (fall semesters)**

**Databases**

Giving classes, scoring students, creating practice exercises.

**2009-2014 (spring semesters)**

**Software laboratory 5. (Database laboratory)**

Giving lab classes on the practical side of databases, scoring students, creating practice exercises.

**Education**

**2014 September – 2016 June**

**Ph.D. candidate**

Budapest University of Technology and Economics,  
Department of Telecommunication and  
Mediainformatics,  
Data Science and Content Technologies Laboratory  
(DCLab)

*Summa cum laude Ph.D. (30. June 2016)*

**2011 September – 2014 September**

**Ph.D. studies**

Budapest University of Technology and Economics,  
Computer Sciences Doctorate School,  
Intelligent Systems Group

**2009 February – 2011. July**

**M.Sc. studies**

Budapest University of Technology and Economics,  
Faculty of Electrical Engineering and Informatics,  
Computer Science and Engineering (M.Sc.).

*Graduated with highest honours (21. June 2011)*

**2005 September – 2009 February**

**B.Sc. studies**

Budapest University of Technology and Economics,  
Faculty of Electrical Engineering and Informatics,  
Computer Science and Engineering (B.Sc.).

*Graduated with highest honours (08. January 2009)*

**2001 September – 2005 July**

**Highschool studies**

Eötvös József Gimnázium,  
Scientific faculty

*Excellent graduation with distinction (25. June 2005)*

**Selected publications**

**Balázs Hidasi**, Massimo Quadrana, Alexandros Karatzoglou, Domonkos Tikk: *Parallel Recurrent Neural Network Architectures for Feature-rich Session-based Recommendations*. At 10<sup>th</sup> ACM Conference on Recommender Systems, RecSys 2016. Boston, USA, 15-19 September 2016.

**Balázs Hidasi**, Alexandros Karatzoglou, Linas Baltrunas, Domonkos Tikk: *Session-based recommendations with recurrent neural networks*. At International Conference on Learning Representations (ICLR). San Juan, Puerto Rico, 2-4 May, 2016.

**Balázs Hidasi**, Domonkos Tikk: *General Factorization Framework for Context-aware recommendations*. In Data Mining and Knowledge Discovery (DMKD). (May, 2015)

**Balázs Hidasi**, Domonkos Tikk: *Speeding up ALS Learning via Approximate Methods for Context-aware Recommendations*. In Knowledge and Information Systems (KAIS). (July 2015)

**Balázs Hidasi**, Domonkos Tikk: *Initializing Matrix Factorization Methods on Implicit Feedback Datasets*. In Journal of Universal Computer Science (J.UCS). (2013)

**Balázs Hidasi**, Domonkos Tikk: *Fast ALS-based Tensor Factorization for Context-aware Recommendation from Implicit Feedback*. At ECML/PKDD 2012, in Machine Learning and Knowledge Discovery in Databases. (2012)

**Balázs Hidasi**, Csaba Gáspár-Papanek: *ShiftTree: an Interpretable Model-based Approach for Time Series Classification*. At ECML/PKDD 2011, in Machine Learning and Knowledge Discovery in Databases. (2011)

## Invited talks

**24. July 2014** **University of Szeged**

I presented a lecture on the context-aware recommendation problem and context-aware algorithms as a part of a summer course at the University of Szeged.

**11. April 2014** **Technical University of Delft**

I gave an hour long talk on my research to fellow researchers at the Technical University of Delft.

**14. March & 25. April 2013** **Óbuda University**

Two lectures on implicit feedback and context-awareness as part of the recommender systems course at the Óbuda University.

## Awards and honours

**04. November 2009** **II. place** award at the **Thesis Competition** organized by the Scientific Association for Infocommunications Hungary (HTE)

**01. September 2009** **Scholarship of the (Hungarian) Republic** for 2009/2010

**20. May 2009** „**Best Presentation**” award at the Graduates' Conference organized by the Scientific Association for Infocommunications Hungary (HTE)

**8-10. April 2009** **III. place** award at the **National Scientific Students' Association Conference** with the dissertation titled "Az idősor osztályozás problémájának megoldása új, döntési fa alapú adatbányászati algoritmussal" ("Solving the problem of time series classification with a novel, decision tree based data mining algorithm")

**19. November 2008** **I. place** award at the **Scientific Students' Association Conference** with the dissertation titled "Az idősor osztályozás problémájának megoldása új, döntési fa alapú adatbányászati algoritmussal" ("Solving the problem of time series classification with a novel, decision tree based data mining algorithm")

**4. March 2004**

National **31st place** in mathematics at the **National academic competition for high school students** (Országos Középiskolai Tanulmányi Verseny (OKTV))

### **Languages**

Hungarian – Native proficiency

English – Full professional proficiency

German – Elementary proficiency