

# ANTONIO ALTAMURA

Software Developer



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## Personal Profile

I'm a passionate full-stack developer and data scientist with a Master's degree in Computer Science. I have been working in several projects as a freelancer full stack developer since 2004. I have also academic research experience in Data Analysis, Information visualization and Computational Social Science. I'm skilled in algorithm design, linear programming model, statistics, back-end and front-end web development.

## Technical skills

- Web Development using LAMP stack (Linux, Apache, MySQL/MariaDB, PHP).
- Web Development using MEAN stack (MongoDB, Express.js, Angular.js, Node.js).
- Data Science application development in Python with SciPy stack (NumPy, Matplotlib, Pandas).
- Back-end development using Java with Spring/Spring Boot.
- Mobile development using Apache Cordova-Ionic and React-native.
- DBMSs: MySQL, MongoDB, Neo4J, PostgreSQL, eXist-db.
- JavaScript graphic libraries: Sigma.js, Linkurio.us, D3.js, Vis.js, HighCharts.js.
- Adobe Creative suite: Photoshop, InDesign, AfterEffects, Illustrator, Animate.
- CMSs: Joomla, Wordpress, Prestashop, Magento.



## Work experience

- Android/iOS Mobile development: "*Glossary of terms relating to Asylum and Migration*" (European Migration Network): a thesaurus for the consultation of legal terms that are relevant in the field of asylum and migration. I parsed and processed for consistency the data and developed a multilanguage app in React-native. **Sep. 2017 - Feb. 2019**
- Research fellowship contract on the project "*Charterclick: A user-friendly tool to detect violations falling within the scope of the EU Charter of Fundamental Rights*" for the development of an application to help victims of fundamental rights violations in European Union territories (charterclick.ittig.cnr.it). I developed a multilanguage web application in MEAN stack (MongoDB, Express, Angular.js, Node.js) **May 2016 - May 2017**
- Full stack development for an health and medicine themed social network (www.okmedicina.it). I developed several components for the CMS in PHP and restyled the UI, improving the UX. **Apr. - Dec. 2015**
- UI/UX Design and client tutoring for the management and selling of products in an e-commerce website (www.hobbyesport.it - temporarily offline). I developed the UI interface for Prestashop and few backend plugins. I also organized some lessons for the administration of the backoffice for the client's employees. **Mar. 2014 - May. 2015**
- Full stack development for an e-sport website (www.ateneoludico.it - temp. offline). I developed the UI interface and the back-end main component for the management of the content for the client. **Mar. - Sep. 2014**
- Full stack development, UI/UX Design and client tutoring for the administration of a fashion and design themed social network (www.welovemoda.it). I developed the UI and several back-end components in PHP for the social interaction on the platform. **Jan. 2013 - Oct. 2014**
- Full stack development and client tutoring for the content management of a website for a Fitness and Wellness Center (www.myworldluxor.com). I designed the front-end template and organized lessons for the management of the content for the client. **Feb. - Sep. 2012**
- UI/UX Design for the website of a MBA (Business Administration Master) - University of Foggia. **Jan. - May 2008**
- UI/UX Design for the website of a MMIP (Management of Innovation and Projects) - University of Foggia. **Feb. - May 2008**
- Content management system development and UI/UX Design for a sports training website (www.nabbaitalia.it). **Sep. 2004 - Dec. 2005**

## Job related skills

- Communication and Advertising Management for the Sport Association NABBA Italia and for the Fitness Center "Centro Benessere Olimpia". Sep. 2004 – Sep. 2016
- Copy editor and graphic designer for the Fitness magazine "QualityClub" (qualityclub.nabbaitalia.it) Sep. 2011 – Apr. 2012

## Education

- **Master's degree in Computer Science with vote 110/110 (cum laude)** Feb. 2019  
University of Salerno (Italy)  
**Some of the most significant projects:**  
**Databases:** Development of a web application for the management of academic papers, journals and books, with UI in Angular.js, back-end developed in Node.js and Data layer in Neo4j (github.com/antonioaltamura/routing\_to\_research).  
**Semantic Web:** Development of a web application for the management of a music themed knowledge base built on dbpedia.com ontologies with back-end in Node.js and Data layer in Apache Jena-Fuseki (github.com/antonioaltamura/lodmusic).  
**Optimization methods:** Development of a Mixed-Integer Linear Programming model for the problem of the *Minimum Height Rooted Label Spanning Tree* (a variant of the Minimum Label Spanning Tree).  
**Data Security:** Development of an invisible Trojan Keylogger for Windows systems with encrypted communication. It exploits DLL injection and WinAPI hooking techniques to hide itself on the victim's machine.  
**Operating Systems:** Development of a distributed algorithm in Apache Hadoop for the analysis of specific occurrences in DNA sequences based on the paper "KMC 2: fast and resource-frugal k-mer counting", S. Deorowicz, et al., Bioinformatics 31.10 (2015).  
**Artificial intelligence:** Development and experimentation of an algorithm for the discovery of relaxed functional dependencies on relational databases.  
**Project management:** Management of an undergraduate team as project manager for the development of a web site for the promotion of the alumni of the Computer Science Department of the University of Salerno.  
**Other projects:** Economy, Introduction to Business management and Marketing.
- **Bachelor degree in Computer Science with vote 95/110** Sep. 2015  
University of Salerno (Italy)

## Publications

- Altamura A et al. "Ex Machina: Analytical platforms, Law and the Challenges of Computational Legal Science." Future Internet 10.5: 37. 2018
- Altamura A., Malandrino D., Lettieri N., "The legal macroscope: Experimenting with visual legal analytics." Information Visualization 16.4: 332-345. 2017
- Altamura A., Lettieri N., Malandrino D., Punzo V., "Agents Shaping Networks Shaping Agents: Integrating Social Network Analysis and Agent-Based Modeling in Computational Crime Research." Portuguese Conference on Artificial Intelligence. Springer, Cham. 2017
- Altamura A., Faggiano A., Malandrino D., Lettieri N., "A computational approach for the experimental study of EU case law: analysis and implementation." Social Network Analysis and Mining 6.1: 56. 2016
- Altamura A., Faro S., Lettieri N., Vicidomini L., "Nets of legal information connecting and displaying heterogeneous legal sources." Proceeding of 2nd. International Workshop "Network Analysis in Law". 2014

## Additional information

**Italian:** Mother tongue. **English:** Advanced comprehension in reading, writing and speaking.

## Soft skills

Good experience in project management and team-working gained through several academic projects.  
Good experience in management and building long-term customer loyalty gained through professional working as freelance.  
Good communication skills, empathic, relational abilities and critical thinking skills gained through academic and athletic experiences. I really enjoy working in groups where you can find heterogeneous experiences, cultures and approaches.

## Interests

I enjoy listening to music (classical, jazz, rock, metal, electronic), watching Movies (comedies, art), practicing Fitness, Judo, Karate, Swimming.  
My favorite authors and novelist are H. Thompson, Oscar Wilde, Bret Easton Ellis, Wittgenstein.  
Lifeguard certification achieved in 2005.

I hereby authorize the use of my personal data in accordance of the GDPR 679/16 – "European regulation on the protection of personal data"

