

## Contact

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## Top Skills

PHP  
C++  
Perl

## Certifications

Structuring Machine Learning Projects  
Convolutional Neural Networks  
Neural Networks and Deep Learning  
Sequence Models  
Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

## Patents

Interactive System for Teaching and Testing for Microbiology Students  
Device and Method for Calitative and Quantitative Determination of Blood Chemical Composition in (Human) Biological Samples  
Contact Nano-Sensors Microsystem Used in Monitoring and Stimulation of Salivary Secretion

# Bogdan Dobrica

Artificial Intelligence Engineer at Bolt  
Bucharest, Bucharest, Romania

## Summary

Experienced Software Architect with a demonstrated history of working in the computer software industry. Proficient in Python, C, Node.js, PHP, T-SQL, Linux, Terraform and Machine Learning, with a proven record of being able to deliver promptly production-ready software using novel technologies. Strong mathematics and algorithms professional, with a Doctor of Philosophy (Ph.D.) in theoretical physics. Uniquely skilled to bridge the gap between business and tech products/solutions through thorough understanding of core business processes, being exposed and delivering products for media, advertising, education, consultancy, gambling, logistics and automotive businesses. Certified Scrum Master.

## Experience

### Bolt

Artificial Intelligence Engineer  
January 2023 - Present (10 months)  
Bucharest, Romania

Joined the honey badgers to lend a hand in their global ML Ops challenges.

### Cognizant Softvision

Artificial Intelligence Engineer  
April 2020 - October 2022 (2 years 7 months)  
Bucharest, Romania

Left the gambling industry for a more challenging, diverse, way larger AI-driven environment. As so far:

- serving as lead of a small machine learning team for a New York fintech startup, working on anomaly detection in trading financial instruments, reinforcement-learning trade initiation and next price prediction models combined with DSP on top of a GCP and AWS infrastructure;
- serving as tech lead for a large Bavarian automotive company quality assurance AI project, working with Hadoop/pySpark, AWS ETLs and

SageMaker; recently joined the AWS onsite team as core architect for implementing SKLearn's ML tuning tools on cloud;

- developed a remote proctoring prototype for a major standardized tests provider by porting and integrating ML models with UWP C#;
- developed a document digitization PoC for the US leader on strategic truckload shipping and logistics using Google Cloud;

[Undisclosed]

Machine Learning Architect

July 2017 - April 2020 (2 years 10 months)

Bucharest, Romania

Getting over the disappointments of the entrepreneurial life, I chose to get back into marketing as a machine learning architect. My responsibilities in this new position are focused on data consolidation and conversion optimization. Daily, I work with large data-sets (+300M records) stored in Microsoft SQL Server for which I develop and optimize SQL procedures; I develop mathematical models for clients and their customers using expert systems (Fuzzy, AHP), supervised and unsupervised machine learning (deep neural nets, GANs and clustering) and work with NumPy and Tensor Flow (python 3), Clapack (C) and Octave (matlab) to optimize model hyperparameters. I use PHP to connect and deliver the results to the company's client service platform.

National Super Group

Security Consultant

March 2012 - October 2017 (5 years 8 months)

Bucharest

The main focus of this job was to provide solution level 4 support to clients requiring advanced access control, privileged management and governance of sensitive business operations for banking and public sectors. The solutions were centered on Shell Control Box (now, Privileged Session Management ) from Balabit (now, One Identity).

Core Security Advisers

General Manager

November 2012 - April 2017 (4 years 6 months)

Bucharest, Romania

Represents my endeavors into the entrepreneurship world. After a 6 months sabbatical to focus on defending my PhD thesis, I decided to take to market a product I was developing as a hobby off-work project: a business process management framework written in PHP OOP that allowed easy creation of

CRM, ERP and BI applications for SMEs. At its peak, the company had in excess of €400k yearly revenue, a 20% operating margin and 8 employees. My role was that of head solution architect, project manager (in a loose SCRUM-based environment) while also being in charge of daily operations management.

The highest achievement was securing a €1.1M government funded research-to-production grant together with €250k from a private investor to implement a machine-learning smart-home hub.

## Extreme Training

### Head of R&D

October 2006 - February 2014 (7 years 5 months)

Bucharest

This was a part-time side-job I took at the request of the owner, providing Extreme Training with support in developing the traininguri.ro CMS - which was by now phased out in favor of Wordpress - together with the CRM and ERP solutions custom build to fit and automatize the business processes the company has in order to keep fixed costs low and improve customer satisfaction. Both CRM and ERP solutions are still in use at the time of writing this (Apr 2022) with little to no changes. Being connected to this business-savvy environment, I eventually took the experience gained from here and started my own business selling an upgraded version of the platform I've developed in Extreme Training.

## Intact Media Group

### Senior Software Developer

October 2007 - December 2012 (5 years 3 months)

Bucharest, Romania

What got me hired in Intact Media Group was a lightweight CMS I developed during my college years. It quickly became the basis of 40+ projects I worked in Intact Media Group, including online shops, image and video sharing platforms, an online news agency and an online national newspaper. During my work here I managed a 4-person web developing team developing from scratch an online turn base strategy game and an advanced cookie-less cross-site tracking platform, along with several iterations and versions of the CMS. Also, I briefly held the Editor-in-Chief position for the Ghimpele newspaper, provided technical insights and tools for the PR damage control department and managed web hosting infrastructure for two of then youngest group projects, Radio ZU and Antena2 (now Antena Stars).

Delta Cultural Foundation  
IT Consultant  
November 2010 - August 2012 (1 year 10 months)  
Bucharest

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## Education

University of Bucharest, Faculty of Physics  
Doctor of Philosophy (Ph.D.), Closed Symmetric Monoidal Categories with  
Application to Exergy Conversion · (2010 - 2013)

University of Bucharest, Faculty of Mathematics and Computer  
Science  
Master of Science (M.Sc.), Distributed Systems · (2006 - 2009)

University of Bucharest, Faculty of Mathematics and Computer  
Science  
Bachelor of Applied Science (B.A.Sc.), Mathematics and Computer  
Science · (2002 - 2006)