Adrian **Butnar**

(+40) 749 637 938 butnar.adrian@gmail.com LinkedIn www.tennis.ml

About Me

Programming Python (numba, pandas, numpy, scipy, matplotlib, tensorflow) · Java · Bash · C/C++
Analytics SQL· MongoDB · Matlab/Octave · R · SSIS · SSAS
Web HTML · CSS · Javascript
Mobile Kotlin · Flutter
Interests Data Science · Software Engineering · Machine Learning · Mathematical Oncology · Probability & Statistics · Quantitative Research
Passions Mathematics · Bullet Chess· Tennis · Table Tennis · Piano

Work experience

Nenos Software *Cluj-Napoca, Romania*
Data Scientist ***February 2020 – Present***
• Currently focusing on analysing data obtained from various OCR models in order to improve models accuracy
• Experience with pipeline development and optimisation

Sector Labs *Cluj-Napoca, Romania*
Computer Vision Intern ***August 2019 – October 2019***
• Developed a classifier that is able to distinguish between real and photorealistic computer generated images
• The algorithm was implemented in Python using openCV and it was based on Local Binary Patterns and Support Vector Machines

Romanian Institute of Science and Technology *Cluj-Napoca, Romania*
Machine Learning Intern ***July 2017 - September 2017***
• Got in touch with supervised and unsupervised learning
• Studied classic algorithms from the literature and implemented them in Python using specific scientific libraries

Achievements

• Bronze Medal - National phase of the Mathematical Olympiad, 2015
• Honourable Mention - National phase of the Physics Olympiad, 2014
• 1st place at the national phase of:
  - AMC (American Mathematics Competition) 8 in 2012 + top 1% Worldwide
  - AMC (American Mathematics Competition) 12 in 2015 + AIME qualification
• participated in 3 national phases of the Mathematical Olympiad and 1 national phase of the Physics Olympiad
• 70+ distinctions, trophies, medals obtained at national scholar contests and Olympiads, especially in mathematics and physics

Projects

Compute digits of Pi using elastic collisions
• A Javascript project depicting how the number collisions between two blocks on a frictionless surface can produce the digits of Pi. It makes use of the notions of phase diagram, conservation of energy and momentum, as well as small-angle approximation. More details can be found on my Github page here.

Website for machine learning and data analysis in tennis
• I have created a website, www.tennis.ml**,** which consists of data visualization, machine learning, blog posts and technical information about tennis.

Heart segmentation
• An interdisciplinary project I have been a part of involved segmentation of heart images (NIFTI files representing 3D MRI and CT scans). My work involved the isolation of heart from other irrelevant tissues by means of the "GrowCut" algorithm. I have used Python and R to handle this task.

A novel song recognition application
• I have developed an application which identifies songs based on a short sample played on the laptop microphone. The algorithm optimizes the audio fingerprinting process by tuning the parameters involved in spectrogram generation, seeking a recognition with high accuracy and a small density of false positives.

Education

Babes-Bolyai University *Cluj-Napoca, Romania*
Bachelor's Degree in Computer Science ***October 2016 – July 2019***
GPA/Average grade: 9.38/10; Practical thesis grade: 10/10

Charles University *Prague, Czech Republic*
Bachelor's Degree in Computer Science **Erasmus study mobility** ***October 2017 – February 2018***

Social and media skills

Cluj Connect – Production responsible
• Responsible for preparing and screening weekly videos for a social group in Cluj-Napoca ranging from 50 to 100 people
• Common tasks involve video editing, subtitle adjusting and the management of video and audio resources

Talent show coordinator
• Coordinated the local phase of a national talent show for teens and young adults as a part of the "Interact" volunteering club
• Presented the show in front of an audience of 100 people

Spoken languages

English: C1(Erasmus OLS+ Certificate – obtained in March 2018, IELTS Certificate - obtained in July 2015)
German: B2/C1 (DSD 2 Certificate – obtained in 2015)
Romanian: mother tongue