

Nándor Bándi

PERSONAL INFORMATION

Zalau, Romania

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PROFESSIONAL EXPERIENCE

- 10/2020-present **Software Developer, R&D**
Softech, Cluj-Napoca
Development of services adhering to an Event Driven Microservice Architecture
Kafka, Spring Cloud Stream, Functional Reactive Programming, MSK, MongoDB, K8S
R&D of a domain specific language for a reactive rule engine
R&D of a digital signature and certificate access library for macOS
C/C++, Objective-C, OpenSSL, GTest
- 10/2019-06/2020 **Diploma thesis collaboration**
Softech, Cluj-Napoca
Collaborated on devising a volume estimation method based on computer vision techniques. I was responsible for the underlying R&D of the method and the design of the computer vision pipeline.
- 07/2019–09/2019 **Computer Vision R&D intern**
Softech, Cluj-Napoca
R&D of a picture based volume estimation method. I gained experience regarding 3D reconstruction, stereo-vision, mathematical optimization, OpenCV, CMake, Docker, ActiveMQ, Computer Aided Geometric Algorithms, Point Cloud Library and Android application development.
- 02/2018-06/2019 **Java mentorship program**
Softech, Cluj-Napoca
Java OOP, Awt, Swing, Networking, MVC, JCF, Stream API, Logging, Reflection, JSP, Tomcat, JDBC, i18n, git, Gradle, JPA, Hibernate, Spring

EDUCATION

- 2020 - 2022 **MSc, High Performance Computing and Big Data Analytics**
Babeş-Bolyai University, Cluj-Napoca
Thesis: Hybrid sparse nonlinear optimization on the GPU
Transpilation of symbolic objective function definitions to their automatically differentiable representation in CUDA
Extended the Differential Evolutionary approach with local search (GD, LBFGS)
Optimization for sparse problems
Approach outperforms a state-of-the-art method (DV-Hop) for the SNLP

2017-2020 **BSc, Computer Science**
Babeş-Bolyai University, Cluj-Napoca
Thesis: Image-Based Volume Estimation Using Stereo Vision
Valedictorian title

PUBLICATIONS

2022 NÁNDOR, B., AND NOÉMI, G. A hybrid differential-evolution-based approach to the sensor network localisation problem. In *Journal of Memetic Computing* (in press)

2020 NÁNDOR, B., TUNYOGI, R.-B., SZABÓ, Z., FARKAS, E., AND SULYOK, C. Image-based volume estimation using stereo vision. In *2020 IEEE 18th International Symposium on Intelligent Systems and Informatics (SISY)* (2020), pp. 000055–000060

HONORS AND AWARDS

2021 **Participated at the Hungarian National Students' Scientific Conference**
Graphics & Computer Vision Section

2020 **First prize at the 23rd Transylvanian Students' Scientific Conference**
Theoretical methods, experiments, simulations & Mathematics section
Presented the results of my research as an R&D intern at Softech

2020 **Valedictorian title**
Graduated first of my undergraduate class

TRAININGS

2021 **Functional Programming in Scala Capstone**
EPFL, Coursera

2020 **Big Data Analysis With Scala and Spark**
EPFL, Coursera

2019 **Central – European Functional Programming School**
ELTE Faculty of Informatics, Budapest
Task Oriented Programming for the Internet of Things, Green Software, B-Method

LANGUAGES

Romanian (native)
Hungarian (native)
English (CAE: C2 Proficiency)