Andreas Neocleous

Data Scientist

Education

2016 **PhD in Computer Science**, *University of Groningen*, The Netherlands, "Ubbo Emmius" PhD scholarship.

2010 **MSc in Sound and Music Computing**, *University of Pompeu Fabra*, Spain.

2009 **BSc in Music Technology and Acoustics**, *Technical University of Crete*, Greece.

PhD Thesis

Title *Computing expert's intelligence: a case in biomedicine and a case in musicology*

Supervisors Professor Nicolai Petkov & Professor Christos Schizas

Description Part 1: Development of novel trainable pattern detectors. Application to the identification of repeating motifs in audio signals.
Part 2: Machine learning methods with focus in artificial neural networks to the early detection of chromosomal abnormalities such as the Down syndrome in the first trimester of pregnancy.

Academic positions

2017–Present **Postdoctoral researcher**, *University of Groningen*, Center for isotope research.
Data scientist. Signal processing and machine learning methods for anomaly detections in dendrochronological and atmospheric time series data.

2012–2014 **Research scientist, principal investigator of the project**, *EU, University of Cyprus, and Cyprus Research Promotion Foundation*.
Computational analysis and development of tools for the identification of the musical structure of the non-Western traditional music in the Middle East. Management of the project's website. http://www.cs.ucy.ac.cy/folk/

2011–2012 **Research scientist for medical applications**, *University of Cyprus and Fetal Medicine Foundation, London*.
Research, design, implementation and validation of machine learning, predictive algorithms and statistical analysis for the early detection of chromosomal abnormalities in the first trimester of pregnancy.

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Research interests

- Machine learning
- Pattern recognition
- Predictive modeling
- Data analytics
- Digital signal processing
- Medical diagnostic systems
- Regression modeling
- Computational intelligence

Further professional activities

2018 **Developer of "CHRONOVIEW"**, *Software for atmospheric data visualization*.

2018 **Reviewer for Journal of Computational Science**.

2018 **Reviewer for Technology and healthcare**.

2018 **Reviewer for IEEE Access**.

2011 – 2018 **Supervision of BSc and MSc students**.

2016 **Funded organization helper at e-health week conference**, *Amsterdam*, The Netherlands.

2015 **Funded organization helper at e-health week conference**, *Riga*, Latvia.

2015 **Reviewer for CAIP**.

Computer skills

Advanced Matlab, Weka, Neuroshell, Linux, Microsoft Windows, Macintosh OS X

Intermediate Python, R,

Basic java, SQL

Journal publications

2018 A. Neocleous, A. Syngelaki, K. Nicolaides, and C. Schizas, "Two-stage approach for risk estimation of fetal Trisomy 21 and other aneuploidies using computational intelligence systems," Ultrasound in Obstetrics and Gynecology, 51.4 : 503-508

2017 A. Neocleous, K. Nicolaides, and C. Schizas, "Intelligent Non-invasive Diagnosis of Aneuploidy: Raw Values and Highly Imbalanced Dataset," IEEE Journal of Biomedical and Health Informatics, 21.5 : 1271-1279

2016 A. Neocleous, K. Nicolaides, and C. Schizas, "First Trimester Non-invasive Prenatal Diagnosis: A Computational Intelligence Approach," IEEE Journal of Biomedical and Health Informatics, Vol. 20.5, pp. 1427-1438

Languages

Greek **Mothertongue**

English **Advanced**

Spanish **Intermediate**

Dutch **Basic**

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