Dimitrios Boursinos

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Nashville, TN 37212

EDUCATION

Vanderbilt University, Nashville TN

- Ph.D., Electrical Engineering, GPA: 3.88/4 — Expected 2021
- Coursework: Cyber-Physical Systems; Detection & Estimation Theory; Network Security; Model-Integrated Computing; Statistical Pattern Recognition; Design & Analysis of Algorithms; Advanced Real-Time Systems

University of Patras, Patras, Greece — 2016

- B.S. & M.S, Electrical and Computer Engineering
- Coursework: Algorithms & Data Structures; Pattern Recognition; Natural Language Technology; Intelligent Control; Microcomputers; Automatic Control Systems; Digital Control Systems; Electrical Machines I & II; Design of Dynamical Systems; Adaptive Control; Robotic Systems; Adaptive Control; Nonlinear Control

WORK EXPERIENCE

Vanderbilt University, Research Assistant, Assured Autonomy

- Developing robustness and assurance methods for Machine Learning Components with focus on classification and regression tasks. — 2018-2020
- Working on a project with Defense Advanced Research Project Agency (DARPA) and Northrop Grumman to estimate robustness levels of autonomous underwater vehicles. — 2018-2020
- Worked on a project by Boeing on safety verification of autonomous controllers on airplanes for navigation through an airport. — 2018-2019
- Worked on robust visual perception from cameras for autonomous vehicle applications. — 2018
- Developed Reinforcement Learning agents for autonomous vehicles using Deep Neural Networks for vehicle control and obstacle avoidance. — 2017
- Used Extended Kalman Filters as well as Particle Filters for localization of moving robots in indoor environments. — 2017

Vanderbilt University, Teaching Assistant, Deep Learning

- Experience teaching and communicating with students through weekly help sessions and replacing the professor when needed. — 2016-2017

The City College of New York, Research Assistant, Biomedical Engineering — 2015

- Designed and built a cost efficient electromyograph computer interface that supports 44 channels and connects to a computer over USB to be used on a robotic arm for amputees
- Applied learning algorithms to make the prosthetic adapt to each user's muscle electrical signals.

University of Patras

- Designed and built a portable, non-contact ECG device intended as a low-cost, continuous monitoring solution for persons at risk of cardiac problems. (Diploma Thesis) — 2016
- Motion analysis of robotic swarm formations cooperating for a common goal. — 2015
- Researched pattern recognition methods for detection of forgery in paintings. — 2014

LANGUAGES and SKILLS

Python, C, C++, Tensorflow, Matlab, Simulink, Embedded Systems, Simulation Environments
RTOS, Linux, Git, Latex, Docker, Embedded Linux

AWARDS

4th place in the 22nd National Olympiad in Computer Science — 2010