MARTIN ASENOV

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EDUCATION

The University of Edinburgh   Sep 2017 - Present
Ph.D. in Robotics and Autonomous Systems

· Supervised by Dr. Subramanian Ramamoorthy and Dr. Kartic Subr

The University of Edinburgh   Sep 2016 - Aug 2017
MRes in Robotics and Autonomous Systems

· "Active sensing of spatiotemporal phenomena with a UAV"
· Supervised by Dr. Subramanian Ramamoorthy

The University of Edinburgh   Sep 2012 - May 2016
BSc (Hons) Artificial Intelligence and Computer Science

· "Dynamic model of interactions between orientation selective neurons in primary visual cortex"
· Supervised by Dr. Mark van Rossum

The University of California, Irvine   Sep 2014 - Jun 2015
International Exchange Student

· Favorite courses: Neural Networks and Deep Learning, Image Understanding, Computer Photography and Vision

PUBLICATIONS

M. Asenov, M. Burke, D. Angelov, T. Davchev, K. Subr, S. Ramamoorthy, 'Vid2Param: Online system identification from video for robotics applications', *arXiv*, 2019

M. Asenov, M. Rutkauskas, D.T. Reid, K. Subr, S. Ramamoorthy, 'Active Localization of Gas Leaks using Fluid Simulation', *IEEE Robotics and Automation Letters, presented at the International Conference on Robotics and Automation*, 2019

M. Rutkauskas, **M. Asenov**, S. Ramamoorthy, D.T. Reid, 'Autonomous multi-species environmental gas sensing using drone-based Fourier-transform infrared spectroscopy', *Optics Express*, 2019

M. Asenov, 'Active sensing of spatiotemporal phenomena with a UAV', *MSc thesis*, The University of Edinburgh, 2017

M. Asenov, 'Dynamic model of interactions between orientation selective neurons in primary visual cortex', *BSc thesis*, The University of Edinburgh, 2016

C. Prijic, **M. Asenov**, R. Wilson, J. Ortega, A. Hashemi, C. Pisuraj, A. Sargsyan, E. Wengert, 'UAV Forge: Innovation for Personal Autonomous Systems', *eScholarship*, University of California, Irvine, 2015

WORK EXPERIENCE

Amazon, PrimeAir   Oct 2018 - Dec 2018
Research Applied Scientist   *Graz, Austria*

· Worked on image segmentation from limited data using domain adaption

Defense Science and Technology Laboratory
Research Assistant

Nov 2017 - Sep 2018
Edinburgh, UK

· Collaboration with Heriot-Watt University, BMT and REDALERT, extending on the stage one project
· Data driven fluid simulation approach to characterize gas dynamics

Defense Science and Technology Laboratory
Research Assistant

Jan 2017 - Jun 2017
Edinburgh, UK

· Stage one funded project for detecting and mapping hazardous gases
· Collaboration with Heriot-Watt University, developing a UAV-mounted broadband spectrometer
· Implementing active sensing gas localization and mapping approaches based on Gaussian Processes

The University of Edinburgh
Tutor

Jan 2016 - May 2016
Edinburgh, UK

· Prepared materials and conducted 9 tutorials for Object-Orientated Programming
· Tutored the Advanced tutorials for the course, answered and helped with additional questions

Thales Avionics
Software Integration and Characterization Developer

Jul 2015 - Aug 2015
Irvine, California, USA

· Prepared students for the AIME and AMC math competitions
· Tutored the Advanced tutorials for the course, answered and helped with additional questions

Avid Academy for Gifted Youth
Math Tutor and Web Developer

Dec 2014 - May 2015
Irvine, California, USA

· Prepared students for the AIME and AMC math competitions
· Developed educational-focused web content management system using Django

Edinburgh University Students Association (EUSA)
Web Developer and IT Infrastructure Technician

April 2014 - Aug 2014
Edinburgh, UK

· IT support for more than 30 venues during Edinburgh Fringe, the largest art festival in the world
· Developed web content management system using Django, participated in all phases of websites development cycle
· Web server management, including recovering after our servers were compromised

Commquest Ltd
Junior Programmer

Jun 2013 – Jul 2013
Sofia, Bulgaria

· Developed crossword game for the iPhone using Objective-C
· Developed Android game using PhoneGap

PROJECTS

Convolutional Neural Networks

Apr 2015 - Jun 2015

· Developed neural network, able to extract 3D information from a single, unedited picture
· Trained on MPI Sintel Dataset, computer generated movie with ground truth available

UAV Forge: Innovation for Personal Autonomous Systems

Sep 2014 - Mar 2015

· Won Dean's Choice award
· Implemented path finding and obstacle avoidance using LIDAR, compressing data in octrees
· Team leader of the Artificial Intelligence/Computer Vision part of the team

Smart Data Hack · · · Feb 2013
· Won award for best UI
· Using a database from the Edinburgh Council our team created 3d interactive cube-map

Barclays Hackathon · · · Dec 2014
· Developed system similar to Google Now/Apple's Siri, but for phones without Internet connection
· Sending a text message with a question, a response with the answer is sent back

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULAR

Resident Assistant · · · Sep 2015 - Aug 2018
· Organized more than 17 events per year, helped students with any academic or personal matter

Representational Roles · · · Sep 2012 - Current
Student Ambassador, Cohort Student Representative, Informatics School Representative, etc.
· Collecting students' feedback, origanized Informatics Ceilidh for more than 200 students
· Toured potential informatics students

EdIntelligence Committee Member · · · Sep 2017 - Current
· Helped organizing events such as career fairs, lectures, movie screenings, etc.; maitaining website

Bulgarian National Dances · · · Sep 2013 - Current
· Took part in numerous semi-professional events: International Evening, 6th Syn Festival - Baharat — Spices of Eastern Music, 33th and 34th Annual University of Edinburgh Dance Performance, Concert 'Bulgarians from New Times', Concert for the Liberation Day of Bulgaria

Cycling · · · April 2019
· Cycled all around Scotland, took part in 256 miles bike ride with Mark Beaumont, raising 400£

AWARDS

Silver medal, BUCS Regatta

Gold medal, Scottish Boat Race

Dean's Choice Award, UAV Forge: Innovation for Personal Autonomous Systems

Award for best UI, Smart Data Hack

Principal's Go Abroad Fund, attended Open Source Conference in Hong Kong

TALKS

Gaussian Processes. Theory and Applications · · · 8th of March, 2017
Skyscanner, Open Tech Meetup, Edinburgh, UK

Gaussian Processes - when neural networks are not enough · · · 29th of July, 2017
SoftUni, Sofia, Bulgaria

SKILLS

Languages	Bulgarian (native), English (fluent)
Leadership	One of the team leaders of more than 50 students for building autonomous quadcopter
Cross-cultural	Lived in UK, USA, Austria and Bulgaria. Travelled to more than 20 different countries

REFERENCES

Available upon request.