

Neşet Ünver Akmandor



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EDUCATION

- 2018 – 2023 (EXPECTED) **Doctor of Philosophy**
Computer Engineering
Northeastern University, USA
- 2013 – 2016 **Master of Science**
Electrical and Electronics Engineering
Middle East Technical University, Turkey
- 2007 – 2011 **Bachelor of Science**
Electrical and Electronics Engineering
Bilkent University, Turkey

ACADEMIC EXPERIENCE

- JAN 2018 – NOW
Robotics and Intelligent Vehicles Research (RIVeR) Lab
Northeastern University, Boston, MA, USA
Graduate Research and Teaching Assistant
- Research on **improving computational efficiency of motion planning algorithms for time-dependent mobile manipulation tasks in dynamic environments**.
 - Worked on the funded (The National Institute for Hometown Security) project: “Automated Assessment of Damaged Environments due to Extreme Events using UAVs”.
 - **EECE 2160 Embedded Design: Enabling Robotics:**
Assisted in labs, graded HWs and reports, held office hours.

- FEB 2013 – FEB 2016
ATLAS Interdisciplinary Robotics Research Lab
Middle East Technical University (METU), Ankara, Turkey
Graduate Student
- Wrote “METU Scientific Research Project” proposal with the budget of ~\$6400 to support my M.Sc thesis and completed successfully submitting a final report.

- JUN 2014 – SEP 2014
Mechatronics and Robotics Laboratory for Innovation
Department of Electronics, Information, and Bioengineering,
Politecnico di Milano, Milano, Italy
Graduate Student Summer Intern
- **Quadrivio Project:** Implemented the backstepping observer method on MATLAB to estimate the tire cornering stiffness, which is necessary to calculate rollover risk indicator of an all terrain vehicle.

SELECTED PUBLICATIONS

- Li, H. et al. (2022). StereoVoxelNet: Real-Time Obstacle Detection Based on Occupancy Voxels from a Stereo Camera Using Deep Neural Networks. arXiv preprint arXiv:2209.08459. (Accepted to ICRA 2023)
- Akmandor, N. Ü et al. (2022, October). Deep reinforcement learning based robot navigation in dynamic environments using occupancy values of motion primitives. In 2022 IEEE/RSJ IROS (pp. 11687-11694). IEEE.
- Akmandor, N. Ü. and Padir, T. (2021). Reactive navigation framework for mobile robots by heuristically evaluated pre-sampled trajectories. International Journal of Robotic Computing, 3(1), 47-68.

PROFESSIONAL EXPERIENCE

- MAY 2022 – SEP 2022
Motional
Boston, MA, USA
Machine Learning Intern, Control Group
- Implemented grid-search and Bayesian Optimization to optimize the hyperparameters of an MPC-based trajectory generation algorithm.

- MAY 2019 – AUG 2019
Schlumberger-Doll Research
Cambridge, MA, USA
Robotics Research Intern
- Implemented Python and macro scripts to perform; (1) the sensitivity analysis of the metrology software which enables CAD to 3D scan (mesh) data alignment, and (2) feature extraction from both CAD and 3D scan of the drilling tool part.

- JAN 2017 – DEC 2017
TUBITAK Space Technologies Research Institute
Ankara, Turkey
Researcher at Real-Time Software Group
- Implemented (1) header files of the on-board computer devices, and (2) software-based test scripts of on-board computer applications for the satellite projects (i.e. TURKSAT-6A).

- AUG 2011 – FEB 2013 & AUG 2015 – JAN 2017
Pars Makina Ltd., Ankara, Turkey
Electrical and Electronics Research Engineer
- (1) Implemented hardware & software of data acquisition system of 80 meter wind measurement mast, and (2) prepared wind measurement analysis and assessment reports of the area.

AWARDS

- 2014 – 2015 TUBITAK 2210-C Graduate Student
Scholarship
- 2014 ERASMUS Graduate Student Summer
Internship Mobility Grant

QUALIFICATIONS AND SKILLS

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|----------------------|---|
| RESEARCH | Motion and Path Planning,
Deep Reinforcement Learning |
| PROGRAMMING | C, C++, Python |
| TOOLS &
LIBRARIES | ROS, MATLAB, MoveIt!, OMPL,
OpenAI Gym, stable-baselines3, smac3 |

PERSONAL ACHIEVEMENTS

- 1999 & 2000 Age 10-12 Turkish National Chess
(CONSECUTIVELY) Championship 2nd place
- 2007 – 2008 Lost weight ~40 kg