M Bedir Tapkan

CONTACT INFORMATION

10708 79 Ave NW
T6E 1S3, Edmonton, AB, Canada

GitHub: bedirT
E-mail: tapkan@ualberta.ca

RESEARCH INTERESTS

Reinforcement Learning, Partially Observable Environments,
Imperfect Information Games, Policy Gradients, Deep Learning, Dark Hex,

EDUCATION

University of Alberta (UofA), Edmonton, AB, Canada
Computer Science
MsC, Computer Science, 2019 - *Ongoing*

- **Supervisors:** Martin Mueller, Ryan Hayward
- **Thesis Topic:** "State of the art methods on Phantom Imperfect Information Games"

North American University (NAU), Houston, Texas, USA
Computer Science **Overall-GPA: 3.79 - Major-GPA: 3.94**
B.S., Computer Science, 2015 - 2018

RESEARCH EXPERIENCE

Undergraduate Research Assistant
University of Houston **January, 2017 - February, 2019**

- **Supervisor:** Dr. Ricardo Vilalta
- Transfer learning methods focused on finding a remedy on exploration/exploitation
- Using meta-learning (and transfer learning) to help reinforcement learning models to achieve adaptivity through environment.

TEACHING EXPERIENCE

Teaching Assistant
University of Alberta **August 2019 - Ongoing**

- TA for CMPUT 455: Search, Knowledge, Simulation under the supervision of Dr. James Wright. Helped to mark, held office hours for helping students who need further explanation on course material.
- TA for CMPUT 355: Algorithms and Puzzles under the supervision of Dr. Ryan Hayward. Helped marking and proctoring, held office hours for students to direct further questions about class material and contributed to the code base development for the class repository.
  Tools: Python, Git, Github
- TA for CMPUT 272: Formal Systems and Logic in Computing Science under the supervision of Lorna Stewart. Helped students understanding the material, marking, proctoring.

Instructor - Algorithms for ICPC
North American University **January 2018 - May 2018**

- Taught basic to advanced algorithms, data structures, competitive programming basics, basic logic, math and coding to 12 students from freshman to senior using C++/Python, Git/Github. Prepared class curriculum, lesson plan, and homework assignments.
- **Tools:** C++, Python, Git, Github

Papers in preparation

Peet-Pare, L., Aghakasiri, K., Tapkan, B., Sattarifard, A., Kohankhaki, F., White, M., Sokota, S. 2021. Using Heteroscedastic Regression to Identify Model Bias. *NeurIPS*

Projects

Anomaly Detection on CO2 levels in ISS **April 2018**

- Created a tool to analyze anomalies on CO2 levels and clusterings inside International Space Station (ISS).
- Presented a poster and the tool in Wearable Technologies Workshop at NASA.
- Worked closely with a NASA team.
- The presented software is used in ISS.
- **Tools:** Python, Pytorch, JavaScript, Pandas, Numpy, Scikit, Flask

MLRPro - Machine Learning Resume Processor **April 2017**

- Created a tool that evaluates the submitted resume, according to the data used to feed the ML systems, and gives result on companies given resume is qualified to apply. Worked with a team of 3.
- **Tools:** Python, Pytorch, Scikit, Flask
- **Repository:** https://github.com/MichaelMMeskhi/MLRP

ACM-ICPC Preparation Curriculum (Open-Source) **October-December 2015**

- Created a curriculum to help preparation process of the international competition ACM-ICPC, to self study algorithms and data-structures and to get the underlying concepts of algorithms.
- The curriculum is ranked in top 20 most popular open source courses on Github in 2018. (Article Link)
- **Tools:** C++, Java, C, Python, Git, Github
- **Repository:** https://github.com/NAU-ACM/ACM-ICPC-Preparation

Honors and Awards

North American University: Exceptional Merit Scholarship, 2014-2019
North American University: President's Honor Roll, 2016-2018

Extracurricular Activities

- RLAI & AMII ***Member*** **2019-2021**
- ACM NAU Chapter ***Chair, Vice Chair, Lab Leader, Senator*** **2015-2018**
- Artificial Intelligence, ACM-ICPC, iOS Development, ***Member in ACM Labs*** **2015-2018**
- NAU Communications Club, NAU Future Leaders Club, ***Graphic Designer*** **2015-2018**
- HackNAU - 2017 — 60+ Attendees hosted, ***Organizer & Director*** **2017**
- HackHouston 2017 Best Project Overall and Best Machine Learning Project, ***1^{st} place*** **2017**
- ACM-ICPC Regional Contest, ***4^{th} place (undergraduate)*** **2017**
- Scholar Development Center — ***Organizer & Director & Co-founder*** **2016**
- iHackathon — 30+ Attendees hosted, ***Organizer & Director*** **2016**
- NAU - Moonlight CTF 1, ***Organizer & Co-Director*** **2016**
- ACM-ICPC Regional Contest, ***18^{th} place*** **2016**

Technical Skills

- **Expert:** Python, C++, PyTorch, Numpy, UNIX, GitHub, Adobe Illustrator
- **Advanced:** TensorFlow, Pandas, Scikit-Learn, C, R, Linux, Git, Java, LaTeX, SQL, Swift, Flask, Django, HTML/CSS, Adobe Photoshop

References

References available upon request