Parsa **Nooralinejad**

COMPUTER SCIENCE PHD STUDENT

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Education

University of Maryland-Baltimore County

PH.D. IN COMPUTER SCIENCE   *2021 - Present*

University of Tehran

BACHELOR'S IN COMPUTER ENGINEERING   *2015 - 2020*

Experience

University of Maryland - Baltimore County

RESEARCH ASSISTANT   *Aug 2021- Present*
- Working with Dr. Hamed Pirsiavash on Developing a Self-Supervised Algorithm for improving Object Detection Task.
- Designed a baseline method for extremely low-budget active learning, the paper is **under review**.

IPM Institute For Research In Fundamental Sciences

RESEARCH INTERN   *2018 - 2019*
- Worked on Designing a Hardware Accelerator for Training of Deep Neural Netowrks
- Published a Paper titled "TaxoNN: A Light-Weight Accelerator for Deep Neural Network Training" int the **ISCAS 2020** conference

University of Tehran

RESEARCH INTERN   *2017 - 2018*
- Worked on a algorithm for solving the neuro-science problem "n-arm bandit"

Publications

A Simple Baseline for Low-Budget Active Learning

Under review
- Proposed a baseline for low budget active learning
- Outperformed all benchmarks in extreme budgets like 0.2% of data

TaxoNN: A Light-Weight Accelerator for Deep Neural Network Training   *ISCAS 2020*

Accepted for Oral Presentation
- Proposed a novel method for accelerating the training process
- Designed a Area efficient Processing element with low power consumption that can do the training and inference tasks.

Honors & Awards

2014	**Bronze Medal**, Iranian National Olympiad in Informatics	*Tehran, Iran*
2013	**Finalist**, Khwarazmi Festival	*Tehran, Iran*

Projects

Self-Supervised Learning for Object Detection   *UMBC CV Lab*

RESEARCH ASSISTANT
- Working on Self-Supervised Learning algorithm for Object Detection task

Topic Labeling   *University of Tehran*

RESEARCHER
- Designing a cross lingual topic labeling algorithm for the university's archive.
- The algorithm is currently in use for classifying the publications in the University of Tehran and linking faculties from different schools who have similar research interests.

Obstacle avoidance robot   *University of Tehran*

STUDENT
- Designed a robot that will take commands from a remote control and warns the chance of collision
- Used AVR microcontroller with ultra-sonic sensors

KhaneBeDoosh *University of Tehran*

- Used React.JS for front-end and Django, node.js, and java spring for back-end
- Implemented a website for searching for house and apartment
- Used MySQL and SQLite Databases

Personal surveillance camera *Personal*

PERSONAL

- Designed a surveillance camera for my room
- Implemented the embedded C code on esp32-cam module, integrated with face detection.
- Implemented a secure streaming server using Django with push notification to the react-native app

M.I.A (My Intelligent Assistant) *Personal*

PERSONAL

- Using google's speech to text API, Implemented a simple voice assistant for my laptop
- Capable to accomplish tasks such as creating or deleting files, typing, reporting status of time, weather, etc
- Use facial recognition to lock the laptop if an unauthorized person try to work with it

Skills

Programming Languages

C, C++, JAVA, PYTHON, JAVASCRIPT, HTML, CSS, PHP

Machine Learning

TENSORFLOW, PYTORCH, NUMPY, MATLAB, PANDAS

Web and Application Development

REACT NATIVE, REACTJS, DJANGO, NODEJS, SQL

Hardware Design

VERILOG, QUARTUS, MODELSIM

Edge Devices

ESP MODULES, ARDUINO, AVR MICROCONTROLLERS, RASPBERRY PI, CYCLONE FPGAS

Teaching Experiences

Data Structure course *University of Tehran*

TEACHING ASSISTANT

Artificial Intelligence *University of Tehran*

TEACHING ASSISTANT

Discrete Mathematic Course *University of Tehran*

TEACHING ASSISTANT

Data Science workshop *Khatam University*

TEACHING ASSISTANT

Data Structure Course *UMBC*

TEACHING ASSISTANT

Programming class *Allameh Helli3 Highschool*

TUTOR