Petar Mircheski

PERSONAL DETAILS

Birth	08, April 1998
Address	Trifun HadziJanev 5/21, Skopje Republic of North Macedonia
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EDUCATION

BSc. Computer System Engineering Automation and Robotics
Faculty of Electrical Engineering and Information Technologies, Ss Cyril and Methodius University
2016-2021
Bachelors thesis in the area of non-linear system. The title of the bachelors thesis is Non-linear analysis of neural interactions. The goal of the research is modeling neural coupling functions with the use of Bayesian inference when subjects are under visual stimulus.
Current GPA:9.08

Msc. Department of Systems and Control Engineering
Tokyo Institute of Technology Japan
2022-
Currently enrolled.

WORK EXPERIENCE AND INTERNSHIPS

Image processing and data science researcher
Eriden LLC., Full-time
2020 February-2021 August
Worked on developing an AI driven solution for analysis of floor plans in raster format used in construction and real estate. Worked on developing post processing algorithms for floor plan reconstruction and worked on 3D visualization of floor plans. Main areas of work include digital image processing, machine learning, data scraping and analytical geometry.

Image processing and data science consultant
Eriden LLC., Internship
2019 June-2019 October
Mandatory one month university internship which on my request was extended to four months. Worked on researching and developing an AI driven solution for the clothing industry. Worked

on a project for Forever 21 developing a robust system for style transfer of clothing found in the stores catalog on a persons clothing. Algorithms used in the project were Mask-RCNN for instance segmentation and detection of clothing in the catalog and its extraction.

Data Base Support
National Bank of Republic of Macedonia., Internship
2018 July-2018 August
Mandatory one month university internship. Worked with SQL relational databases. Worked on developing SQL queries that were used in customer support.

Lab Assistant
Faculty of Electrical Engineering and Information Technologies, Ss Cyril and Methodius University., Part-time
2018 January-2018 June
Worked with students in the computer science lab. Demonstrated the principles of object-oriented programming in the programming language C++. Held three weekly lab classes.

Research Assistant
Msc. Department of Systems and Control Engineering Tokyo Institute of Technology Japan
2022 April - Current
Conducted numerical experiments using advanced mathematical and computational techniques, such as differential equations, and numerical simulations. Utilized specialized software tools (e.g., Python, Julia) for analysis and simulations.

PAPERS AND CONFERENCE PROCEEDINGS

- P. Mircheski, J. Zhu, H Nakao, "Phase-amplitude reduction and optimal phase locking of collectively oscillating networks", Chaos 33, 103111 [1-18] (2023)

CONFERENCES ATTENDED

- P. Mircheski, J. Zhu, H Nakao, "Phase-amplitude reduction of networks and synchronization", Poster Presentation at Dynamics Days Europe, Naples, Italy, Poster presentation (05-06.09.2023)
- P. Mircheski, H Nakao, "Phase-amplitude reduction of limit cycling networks for optimal synchronization", Poster Presentation at International Union of theoretical and applied mechanics, Tsukuba, Japan (01.08.2023)
- P. Mircheski, H Nakao, "Phase-amplitude reduction for optimal synchronization of limit cycling networks", Poster Presentation at International federation of automatic control, Yokohama, Japan (13.07.2023)

- P. Mircheski, J. Zhu, H Nakao, "Phase-amplitude reduction of collectively oscillating networks", Oral presentation at Conference on complex systems, Palma de Mallorca, Spain (17.10.2022)

WORKSHOPS ATTENDED

- CREST Computational Dynamics General Meeting, Matsuyama Ehime, Ehime University Media Hall Program, (19 20.12.2023)
- CREST Computational Dynamics General Meeting, Awajishima Hyogo, Awaji Yumebutai, (25 26.5.2023)
- Hirosaki University Workshop on Nonlinear Science 2022, Hirosaki Aomori, Iwaki Hall, 50th Anniversary Memorial Hall, Bunkyocho Campus, Hirosaki University, (14 15.11.2022)

SKILLS

Languages	Macedonian (mother tongue) English (fluent) Serbo-Croatian (conversational)
Software	Python, Matlab, LaTeX, C++, JavaScript, Octave, TypeScript, Emacs, Bash Script and Unix, LabVIEW, SQLLite, PostgreSQL, Julia, Ladder Logic Programming, React, Nextjs, Redux, Strapi-CMS, Docker, Pytorch, Scikit-Learn, Git

REFERENCES

Available upon request