

Pankayaraj . P BSc Computer Engineering

✉ pankayaraj1995@gmail.com

🌐 <http://punk95.github.io>

🌐 <https://www.linkedin.com/in/pankayaraj-pathmanathan-259926119/>

Employment History

2019-2019 - 5 months

📌 **Research Assistant Intern** SLTC, QBITS Lab.

- As a first author published an ECC2020 paper

- As a first author another work is under review at IEEE CDC 2020

Education

2015-2020

📌 **B.Sc. Computer Engineering** University of Peradeniya, Sri Lanka 3.4 out of 4 GPA

2002-2014

📌 **Sri Koneshwara Hindu College** Trincomalee.

Research Publications

Conference Proceedings

- 1 **Pankayaraj. P.** & Maithripala, D. H. S. (2020). A decentralized communication policy for multi agent multi armed bandit problems, In *European Control Conference 2020*.
- 2 **Pankayaraj P.** Sumanasekera, Y., Samarasinghe, C., Elkaduwe, D., Jayasinghe, U., & Maithripala, D. H. S. (2020). Multi-agent reinforcement learning in sparsely connected cooperative environments[awarded the **Best Research Paper**], In *Escape 2020*.

Under Review






- 1 **Pankayaraj P.**, Maithripala, D. H. S., & Berg, J. M. (2020). *A decentralized policy with logarithmic regret for a class of multi-agent multi-armed bandit problems with option unavailability constraints and stochastic communication protocols* [Under Review for *59th IEEE Conference on Decision and Control*].

Projects







- 2020 📌 **Multi-Agent Reinforcement Learning in Sparsely Connected Cooperative Environments** Dealing with the sparse connectivity in multi agent settings.
Report <https://drive.google.com/drive/folders/1JtL88fSC-4xC1kBv4ZEm2rQhojSanBDz>
- 2019 📌 **Reinforcement Learning Based Autonomous Quadcopter Control**
Using Reinforcement Learning algorithms to make Quadcopter control decisions on an AirSim simulated environment

REPORT: <https://drive.google.com/drive/folders/16Ej8XL4SRrthL58FsMMnYDaD5WYWruF9>
- 2018 📌 **A user recommendation method using Bayesian Reinforcement Learning**
Github Link : <https://github.com/punk95/sitnshop/tree/BackEndAlgorithm>
REPORT : <https://drive.google.com/drive/folders/19Sq1UExeANUWQGGVf8EXBCrPRntAFvaF>

Projects (continued)



- 2017  **Creating a python based library with a Tensor flow back end for Bayesian Optimization and Multi Arm Bandit Problem**
GitHub Link : <https://github.com/punk95/Multi-Arm-Bandit-Library>
PyPi link : <https://pypi.python.org/pypi/mabandit/1.3>
REPORT:<https://drive.google.com/drive/folders/1H2Pcbfj825LPbYjo3rnKLY0lgRQCFwXb>
- 2018  **SitnShop– An Advertising platform for shops** An advertising platform for anykind of shop and it also helps the customers of the shops to easily find related shops.
Github Link : <https://github.com/punk95/sitnshop/>
REPORT : <https://drive.google.com/drive/folders/1ZcsJkFPDCJhvh8k0yt0LjnxBkJ1cAgaB>
-  **Infant Sleep Apnea detection system : A portable device that can detect Sleep Apnea condition in infants using techniques such as Optical flow, Edge detection, Fourier analysis with python, Raspberry pi.**
Github Link : https://github.com/punk95/Sleep_Apnea_Detection
REPORT:https://drive.google.com/drive/folders/17fLXhj1uxl5MuqNqEM46_tYuRsWoXC2Z
-  **Making a central server for the sleep apnea problem**
Technologies : Python, Django, Django rest framework, HTML/CSS,JS
Github Link: https://github.com/punk95/Django_Server_Sleep_Apnea
- 2017  **ExpertMiner :**
Earth resource location prediction using Hyper Spectral Images from satellites Techniques : Pattern Recognition, Correlation Mapping
Github Link : https://github.com/punk95/HSI_Project

Skills

- Languages  Strong reading, writing and speaking competencies for English, Tamil.
- Coding  Python , Java , , \LaTeX , C++, C, Matlab
- Libraries  Tensorflow, Pytorch, Kivy, Numpy, Scipy
- Web Dev  Django
- Intrested Fields  Reinforcement Learning, Deep Learning, Machine Learning, Statistics and Probability, Bayesian Models, Numerical Computation, Algorithmic Problem Solving, Web and GUI development
- Misc.  Academic research

Miscellaneous Experience

Awards and Achievements

- 2017  **ACES Hackathon 2017(Intra university hackathon)** : Project:Expert miner: Software section winners, Best idea of the competition
- 2016  **ACES Coders v6.0** (Inter university programming competition):Country Rank : 4th

Miscellaneous Experience (continued)

- **IEEEExtreme 10.0 Programming competition**(24 hour Global Programming competition
Country Rank: 38th
World Rank: 330th

References

Dr D.H.S Maithripala

Lecturer

University of Peradeniya,
Peradeniya, Sri Lanka.

smaithri@pdn.ac.lk

Dr Dhammika Elkaduwe

Lecturer

University of Peradeniya,
Peradeniya, Sri Lanka.

dhammika.elkaduwe@gmail.com