YOGESH PAWAR

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EDUCATION

Concordia University   **Montréal, Canada**
M.A.Sc. in Information Systems Security   *Jan 2019 - Dec 2020*
CGPA: 3.83/4.3

RIT, Shivaji University   **Maharashtra, India**
B.Tech in Computer Science and Engineering   *Jun,2013-May,2017*
GPA: 3.27/4.00

EXPERIENCE

Université de Montréal   **Montréal, Canada**
Web developer and ML engineer   *Jan 2021 - present*

Ciena Corporation   **Montreal, Canada**
Data science Intern   *Feb 2020 - Nov 2020*
○ Worked on research project related to "Analytics on 5G – Topology".

Concordia University   **Montréal, Canada**
Research Assistant-Machine learning and Data science, (CIISE)   *Jan 2019 - Dec 2020*

Concordia University   **Montréal, Canada**
Teaching Assistant, (Malware Defenses and Application Security)   *Jan 2020 - April 2020*

Canada Excellence Research Chairs team (CERC)   **Montréal, Canada**
Programmer and Research Consultant, (Concordia University)   *Aug 2019 - April 2020*

Veer Infotech   **Rajasthan, India**
Trainee Network Security Engineer   *Jan 2018 - Nov 2018*

Chegg India   **Pune, India**
C.S. Subject Matter Expert   *April 2018-Dec 2018*

QSpiders, Pune   **Pune, India**
Software Engineer Intern   *Jun 2017 - Dec 2017*
○ Worked on project related to Software testing, Core Java and SQL.

KEY SKILLS

○ Design testable, version controlled and reproducible production code for model deployment.
○ Building Reproducible machine learning pipelines with continuous integration.
○ Model deployment using Heroku(PaaS), Building and Running the Docker Container, deployment using AWS-ECS (IaaS).

Programming Language	Python, R, C++, Java.
Web development	HTML, CSS, React.js, Node.js
Research Tool and Software	Kubernetes, Wireshark, OWASP, LaTeX, MATLAB, INSEL, Kivy
DBMS	Oracle, MySQL, PostgreSQL
Languages	English, Hindi, Marathi, Marwari, Gujrati, Punjabi
Machine learning frameworks and tools	Pytorch, TensorFlow, Anaconda, PySpark, Scrapy, Keras, PyTorch, and Natural Language Toolkit.
Data Analysis Libraries	scikit-learn, scikit-image, NumPy, Matplotlib, SciPy, Pandas, OpenCV, and PyMC3.

PUBLICATIONS

- Yogesh Pawar, Manar Amayri, and Nizar Bouguila *"Occupancy Estimation in Smart Buildings: Impact of Data Quality on Feature Selection"* will be published at the IEEE International Conference on Industrial Technology (ICCE 2022) .

- Yogesh Pawar, Manar Amayri, and Nizar Bouguila *"An Accelerated Non-parametric Bayesian Approach for Anomaly Detection in Semi-Bounded Domains with Feature Selection"* will be published at the 2022 International Electrical Engineering Congress (iEECON2022).

- Yogesh Pawar *Thesis- Master of Applied Science (" A Study on Anomaly Detection Using Mixture Models")*, Concordia University.

- *"Oil Spill Detection in SAR images using Online Extended Variational Learning of Dirichlet Process Mixture of Gamma Distributions"* published at the Statistical and Machine Learning Models for Remote Sensing Data Mining Recent Advancements (2021) .

- Yogesh Pawar, Manar Amayri, and Nizar Bouguila *"Performance Evaluation of Adversarial Statistical Learning using variational mixture models"* published at the IEEE International Conference on Industrial Technology (ICIT-2021) .

- Yogesh Pawar, Manar Amayri, and Nizar Bouguila *"Performance Evaluation of Geometric Area Analysis Technique for Anomaly Detection Using Trapezoidal Area Estimation"* published at the International Symposium on Networks, Computers and Communications (ISNCC-Oct-2020).

- Yogesh Pawar, Nuha Zamzami, and Nizar Bouguila *"An Effective Hybrid Anomaly Detection System Based on Mixture Models"* published at the International Symposium on Networks, Computers and Communications (ISNCC-Oct-2020).

- Yogesh Pawar, Abhijeet Chougule *"Surveillance using Active RFID and Image Processing"* published in International Conference on Information, Communication, Instrumentation and Control - 2017 (ICICIC-'17), in IEEE Xplore (Conference ID 41237),International Journal of Current Research, Vol. 9, Issue, 05, pp.50266-50268, (May, 2017).

- Yogesh Pawar, Archna Ivre *"Android Application for Ringing and Accessing Device Remotely Using SMS"* presented in the conference and published in International Research Journal of Management, IT Social Sciences, and Volume 5. No 2. (March, 2018).

RESEARCH EXPERIENCE

- Adversarial Statistical Learning for Anomaly Detection in the Fog: Finite, Infinite mixture models
- Geometric Area Analysis Technique : Finite, Infinite mixture models.
- Finite, Infinite mixture models: Method of Moments, EM-algorithm, parameter estimation, Maximum likelihood estimation.
- Bayesian inference: Hierarchical modeling, including popular models such as Approximate poste-

rior inference Variational inference, mean-field, and stochastic variational inference.

- o Bayesian non-parametric: Mixture models, admixtures, Dirichlet process, Chinese restaurant process Feature allocations, beta process, Indian buffet process, Combinatorial stochastic processes,Learning functions, Gaussian processes, Probabilistic numerical, Bayesian optimization etc.

PROJECTS

Adversarial Statistical machine learning with variational mixture models   *Aug 2020 – Nov 2020*
- o Evaluated an adversarial statistical machine learning ADS by applying variational mixture models like-Dirichlet, Inverted Dirichlet, Generalized Inverted Dirichlet, Beta-Liouville, and Inverted Beta-Liouville.

COVID detection in X-ray images using variational mixture models   *Jun 2020 – Jul 2020*
- o COVID positive case detection on data published by Dr. Joseph Paul Cohen and Kaggle's X-ray chest data using variational mixture models like Variational Gamma with an accuracy of 99.25 % and Inverted Gamma mixture model with an accuracy of 98.0 %.

Facebook's Hateful Memes Challenge   *Jun 2020 – Aug 2020*
- o To identify the hateful post as memes, a concept like- Deep learning, Image-processing, NLP, Object detection, Object classification, Sentiment analysis, and different statistical models used to fulfill project objectives.

Anomaly detection system using Trapezoid area estimation   *Jan 2020 – Jun 2020*
- o An anomaly detection system is developed by applying Trapezoid area estimation along with mixture models like Beta, Inverted Beta, Generalized Dirichlet, and Generalized Inverted Dirichlet.

SAR- Oceanic Oil spill detection using variational models   *Jan 2020 – May 2020*
- o Variational mixture models like Beta, Gamma, Inverted Beta, Generalized Dirichlet, and Generalized Inverted Dirichlet are used to detect Oil-spill using SAR data.

Python interface with INSEL IDE   *Aug 2019 – March 2020*
- o Built an interface to integrate python in CPP INSEL IDE.

Android application for smart cities using machine learning   *Aug 2019- Dec 2019*
- o An android application to predict electricity consumption, occupancy behavior, and temperature using different machine learning algorithms in python based application development tool Kivy.

Statistical Decision-making using mixture models and variational learning   *Feb 2019- June 2019*
- o Clustering and predicting outcomes for NSL-KDD and UNSW-NB15 datasets using different mixture models (Inverted Dirichlet, Generalized Inverted Dirichlet) and variational learning for the same models.

Surveillance System Using Active RFID Tag and Motion Detection Camera   *May 2016 – Feb 2017*
- o Key areas explored through the project were RFID, Tags, Reader, Image Processing, Motion detection,SM130-EK kit. Considering its uniqueness and innovative method, the leading IT Company offered 9,646 CAD for this system during the project presentation event.

Remote Mobile Access Android Application   *May 2017 – Dec 2017*
- o Project aimed at locating a remote device on silent mode, we can remove this mode by sending a text command to that device to ring phone via this application. Worked on Android Studio 3.0, Java, basics of programming.

Smart Attendance System using Image Processing   *Jan 2017 – Jun 2017*
- o Count number of student present in class and identify their faces and mark attendance on organization or colleges private cloud servers.

ONLINE PROFILE

LinkedIn- `https://in.linkedin.com/in/yogeshpawar223`
GitHub- `https://github.com/YP4US`