

EDUCATION

M.Eng ECE	University of Waterloo	Sep 2022 – Dec 2023
• Coursework: Specialization in Artificial Intelligence and Machine Learning		
B.Tech Computer Science	Lovely Professional University	Aug 2014 – Jun 2018
• Coursework: Data Structures, Algorithms, Networks, Operating Systems, Machine Learning, Internet of Things		

SKILLS

- **Languages:** Python, JAVA, C++, C, Haxe
- **Libraries:** TensorFlow, Keras, PyTorch, AutoGluon, NLTK, Scikit-learn, VaderSentiment
- **Databases:** MySQL, Postgres, Redis, BigData, GraphQL
- **Stack & Cloud:** NLP, Forecasting, Generative AI, Computer Vision, AWS, Google Cloud
- **Tools:** GPT, Docker, DVC, Github, Jira, Jenkins, Confluence, CI/CD

EMPLOYMENT

Machine Learning Associate	QuickPlay & Vector Institute	Dec 2022 – May 2023
<ul style="list-style-type: none">• Technology stack: Python, PyTorch, TensorFlow, Google Cloud, BigData• Formulized Quality of Experience (QoE) accurately using different attributes.• Analysed various methodologies and techniques to calculate and forecast QoE.• Exploratory Data Analysis of streaming data to create Forecasting model (QoE).• Developed Machine Learning models to predict QoE for next 30 minutes.		

Software Engineer	Xperi Corporation	Nov 2019 – Aug-2022
<ul style="list-style-type: none">• Technology stack: Python, NLP, AWS, Docker, Redis, C, CI/CD• Developed core algorithms for Advanced Search & Recommendation.• Implemented new features for conversation product.• Developed and integrated data publish pipelines for multiple customers.• Data generation and data merge optimization.		

Software Engineer	TiVo Corporation	July 2018 – Nov 2019
<ul style="list-style-type: none">• Technology stack: Python, JAVA, C++, Haxe, Javascript, MySQL• TiVo app development on Android, iOS, Web, and Linux STBs.• Improved translation and delivered to different customers across major languages.• Developed HDR, VOD, SOCU and SCTE-27 subtitle feature for TiVo STBs.• Extraction and analysis of STB and TiVo app logs.		

Software Engineer Intern	TiVo Corporation	July 2017 – June 2018
<ul style="list-style-type: none">• Technology stack: Python, JAVA, C++, JavaScript, iOS• Feature development for TiVo iOS app.• Improved code to reduce app crash rate from 12% to 4%.• HDMI-CEC feature development for TiVo STBs.• Optimized translation delivery for multiple languages.		

PATENTS

- **Systems and Methods for improving Content Recommendations using a Trained model.**
[US11551086B2](#)
- **Systems and Methods for improving Comprehensions in Translation based on Context-based references.** [US20220100970A1](#)
- **Systems and Methods for Converting an input Content item based on Contexts.**
[US20220171939A1](#)

PROJECTS

- **Semantic segmentation of Field Anomalies** | Deeplab, ResNet, PyTorch: Detecting 9 different field anomalies from field dataset using semantic segmentation.
- **Finding exoplanets using Microlensing** | Keras, Tensorflow, CNN: Detecting exoplanets in each image set using principles of Microlensing and CNN.
- **Sentiment Analysis & Feedback** | Tensorflow, Scikit-Learn, Sklearn, VaderSentiment: Recommending content and ranking search based on user sentiment in multiple languages.
- **Child Detection using Voice** | Keras, Tensorlow, Scikit-learn: Detecting child using voice in multiple languages to filter search and recommendation.
- **Seller Management App** | Angular, MongoDB, Nodejs: Managing and recommending shopkeepers about product.
- **Tivo Coins** | Haxe, C++, Java: Creating system to earn and redeem coins for premium VOD content.

AWARDS & ACHIEVEMENTS

- Nominated for Vector AI scholarship.
- High-5 Awards at Xperi for exemplary performance.
- Awarded 4000 USD by TiVo under innovation awards for patent applications.
- Runner up at TiVo hackathon for creating a prototype of TiVo coins.
- Gold medallist at International Olympiad of Mathematics.