

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
- **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"><li>• <b>Technology stack:</b> Python, PyTorch, TensorFlow, Google Cloud, BigData</li><li>• Formulized Quality of Experience (QoE) accurately using different attributes.</li><li>• Analysed various methodologies and techniques to calculate and forecast QoE.</li><li>• Exploratory Data Analysis of streaming data to create Forecasting model (QoE).</li><li>• Developed Machine Learning models to predict QoE for next 30 minutes.</li></ul>		
Software Engineer	Xperi Corporation	Nov 2019 – Aug-2022
<ul style="list-style-type: none"><li>• <b>Technology stack:</b> Python, NLP, AWS, Docker, Redis, C, CI/CD</li><li>• Developed core algorithms for Advanced Search &amp; Recommendation.</li><li>• Implemented new features for conversation product.</li><li>• Developed and integrated data publish pipelines for multiple customers.</li><li>• Data generation and data merge optimization.</li></ul>		
Software Engineer	TiVo Corporation	July 2018 – Nov 2019
<ul style="list-style-type: none"><li>• <b>Technology stack:</b> Python, JAVA, C++, Haxe, Javascript, MySQL</li><li>• TiVo app development on Android, iOS, Web, and Linux STBs.</li><li>• Improved translation and delivered to different customers across major languages.</li><li>• Developed HDR, VOD, SOCU and SCTE-27 subtitle feature for TiVo STBs.</li><li>• Extraction and analysis of STB and TiVo app logs.</li></ul>		
Software Engineer Intern	TiVo Corporation	July 2017 – June 2018
<ul style="list-style-type: none"><li>• <b>Technology stack:</b> Python, JAVA, C++, JavaScript, iOS</li><li>• Feature development for TiVo iOS app.</li><li>• Improved code to reduce app crash rate from 12% to 4%.</li><li>• HDMI-CEC feature development for TiVo STBs.</li><li>• Optimized translation delivery for multiple languages.</li></ul>		

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.