

# Sai Paladugu

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## EDUCATION

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### Carleton University

December 2025

*Bachelor of Computer Science (Honours), Minor in Math*

*GPA: 3.85/4.0*

- **Relevant Courses:** Artificial Intelligence, Machine Learning, Reinforcement Learning, Database Management, Data Structures and Algorithms, Statistics, Linear Algebra, Computer Vision

## EXPERIENCE

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### Nokia | *Machine Learning Intern*

May - Current

- Developed and deployed ML models using Python and TensorFlow to analyze network performance; built data preprocessing pipelines and optimized neural network architectures, increasing efficiency by 20%
- Designed and implemented end-to-end pipelines for LLM model evaluation and deployment, leveraging Apache Airflow for streamlined orchestration and scalability
- Developed a Kubernetes-managed web scraping framework, packaged with Docker, to automatically source and validate cutting-edge LLM models from HuggingFace for integration into Nokia's AI ecosystem

### Cisco | *Machine Learning Intern*

Sept - Dec 2023

- Developed a predictive ML model leveraging SVMs and k-fold cross-validation to classify support ticket urgency, ensuring robust performance at 85% accuracy and cutting resolution times by 30%
- Created an API using LLMs for processing natural language queries in Elasticsearch; adapted by 12+ Cisco teams
- Enhanced Python pipelines for automated data preparation and feature extraction, streamlining machine learning model development and conserving developer resources

### Cisco | *Full-stack Development Intern*

May - Aug 2023

- Led the development of an internal Docusaurus-based knowledge hub, integrating NLP-driven recommendations for personalized content discovery and enhanced user engagement
- Engineered a backend API incorporating automated machine learning pipelines to classify, rank, and streamline content releases, reducing manual intervention and boosting operational efficiency

### Carleton University | *Linear Algebra Teaching Assistant*

Jan - Apr 2023

- Delivered lectures and tutorials to reinforce key mathematical concepts, enhancing students' understanding of abstract data transformations relevant to data science and machine learning

### Actua | *STEM Outreach Instructor*

Sep - Dec 2022

- Traveled across the city teaching underprivileged kids about CAD software, block coding, and other topics
- Conducted a weekly Arduino programming seminar for high school students interested in engineering, providing hands-on experience with micro-controller programming, project-based learning, and collaborative problem-solving

## PROJECTS

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### Brain Tumor Detection using YOLOv8 | *Python, YOLOv8, PyTorch, Computer Vision*

- Implemented a YOLOv8-based deep learning model using PyTorch to accurately detect and classify brain tumors in MRI scans, enhancing diagnostic efficiency and reliability

### 2048 RL Agent | *Python, PyTorch, Reinforcement Learning*

- Developed a Deep Q-Learning agent using PyTorch that autonomously learns and optimizes strategies to achieve high scores in a 2048 game environment

### Spotify MoodWave | *Spotify Web API, OpenAI GPT, Angular, Node.js*

- Developed an AI-powered, real-time playlist curation platform using Angular for mood-based music selection

## SKILLS

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**Languages:** Python, R, Java, C++, SQL, JavaScript, Bash, Scala

**Frameworks/Libraries:** TensorFlow, PyTorch, Scikit-learn, Keras, OpenCV, Dask, Pandas, NumPy, Matplotlib

**Databases/Tools:** MySQL, Elasticsearch, Redis, Unix, Git, Docker, Airflow, Kubernetes, Kafka, AWS, Azure