

Vignesh Kumar Karthikeyan

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EDUCATION

University of Colorado Boulder

Boulder, USA

Master's in Computer Science (Specialization in **Artificial Intelligence**) (CGPA : 3.96/4.00)

Aug 2023 – May 2025

College of Engineering Guindy, Anna University

Chennai, India

B.E in Computer Science and Engineering - **First Class with Distinction** (CGPA : 3.45/4.00)

Aug 2019 – Apr 2023

SKILLS

Programming Languages and Web Technologies: Java, Python(NumPy, Pandas, PyTorch, Keras, Tensorflow, Matplotlib, Scikit-learn, Selenium), R, C, C++, Shell Script, HTML/CSS, JavaScript, React, Node.js

Databases and Data Visualization: Azure SQL, MySQL, Firebase, IBM DB2, Power BI, Tableau

AI, Cloud, and High-Performance Computing: ChatGPT, Copilot, Claud AI, Gemini, Azure AI Services, Azure Machine Learning, Google Cloud Platform, Hadoop, Spark, AWS (S3, EC2), Docker, Kubernetes, Terraform, RabbitMQ, CUDA GPU Architecture

Developer Tools: VS Code, PyCharm, IntelliJ, Eclipse, GitHub, Git, Jupyter Notebook, Aternity, Google Collab

CERTIFICATIONS

- Microsoft AI-102 Azure AI Engineer Associate
- Toastmasters Certification - Presentation Mastery 1 (PM1)

EXPERIENCE

MSCS Course Facilitator

Apr 2024 – Present

University of Colorado Boulder - Coursera

Boulder, USA

- Oversee student support and course content for the courses, ensuring timely responses in Salesforce and hold regular online office hours for students to clarify their course related doubts
- Courses facilitated cover key areas in **Data Mining, Machine Learning and Deep Learning**

HVAC Data Entry Technician

Oct 2023 – Apr 2024

University of Colorado Boulder - Facilities Management

Boulder, USA

- Developed a Python-based automation code using Selenium for the **City of Boulder**, significantly streamlining the data entry process
- Reduced manual entry time by over **95%** and generated weekly cost savings exceeding **\$2500**

Undergraduate Technical Intern

Jan 2023 – Jun 2023

Intel Corporation

Bangalore, India

- Automated JSON data extraction for **65000** devices, through REST APIs by developing an efficient Python code that reduced workload from **2 hours** to just **10 minutes** (enhancing efficiency by **90%**)
- Conducted analysis on around **80,000+** Intel devices, performing Platform Ring Analysis and Fleet Health Monitoring

PROJECTS

Study Group Manager: React.js, Node.js, Kubernetes, Terraform, RabbitMQ

Dec 2024

- Developed a 'Study Group Manager' application facilitating student collaboration by matching schedules and courses, utilizing technologies such as Google Cloud Platform, Kubernetes, Terraform, and RabbitMQ

Movie Recommendation Engine and Revenue Prediction: Python, Machine Learning

Dec 2023

- Enhanced a linear regression model for predicting movie revenues with **70.34%** accuracy and developed a hybrid recommendation system using collaborative and content filtering with movie genre weightages

Wind Power Prediction using Ensemble Learning: Python, Machine Learning

Apr 2023

- Developed an ensemble model (Transformer, LSTM, Gradient Boosting) improving prediction accuracy to **82%**, outperforming the KDD 2022 cup model with an **18%** reduction in mean absolute error

LEADERSHIP

Director of Cultural Events

Oct 2023 – Nov 2024

American Association of Engineers of Indian Origin (AAEIO) - CU Boulder Chapter

Boulder, USA

- Led cultural events like Diwali 2024, New Year Festival 2024 for **1000+** students, building community and cultural engagement.

EXTRACURRICULAR ACTIVITIES

Competitions: Awarded 2nd place at the "2017 International Teenager Design and Art Award" held at Busan, South Korea