

Curriculum Vitae

# Chandra Gummaluru

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## Education

### MASc Computer Engineering

University of Toronto (Jan 22 - Present)

- Research areas include stochastic control and mathematical game theory.

### BASc Computer Engineering

University of Toronto (Sept 16 - Apr 21)

- Minor in Artificial Intelligence Engineering
- **Capstone Project:** Federated Machine Learning System Design and Practical Architecture
  - Developed a framework that enables distributed machine learning (with support for private and non-homogeneous data-sets) using [PyTorch](#) under the supervision of Professor Ashish Khisti.
  - Recipient of the Certificate of Distinction
  - [Video Presentation](#)
  - [Poster Presentation](#)

## Teaching Experience

### Course Instructor for CSC384: Introduction to Artificial Intelligence

University of Toronto (Jan 22 - Present)

- Delivered lectures to a class of approximately 90 undergraduate students.
- Developed [course material](#) based on existing material from previous instructors.

### Teaching Assistant for CSC384: Introduction to Artificial Intelligence

University of Toronto (Jan 21 - Apr 21)

- Gave a [guest lecture](#) concerning inference on Bayesian networks via sampling methods.
- Conducted tutorials for programming assignments about uninformed search algorithms (e.g., breadth-first, depth-first, and uniform-cost), and informed search algorithms (e.g., A\*).

- Interfaced auto-grader scripts for marking over 400 assignments automatically.

### **Teaching Assistant for CSC420: Introduction to Image Understanding**

University of Toronto (Sept 20 - Dec 20)

- Delivered tutorials and hosted office hours explaining course concepts for a 4th-year course on computer vision consisting of approximately 250 students as a 4th-year student.
- Marked approximately 100 assignments and course projects consisting of both theoretical and programmatic concepts of computer vision.

### **Teaching Assistant for APS111/APS112: Engineering Strategies and Practice I and II**

University of Toronto (Sept 20 - Apr 21)

- Guided 12 teams each consisting of six 1st-year students through the engineering design process, including identifying the problem, specifying the requirements, and providing a design specification
- Marked reports on project requirements and design specification and provided written feedback within the documents and oral feedback through weekly status meetings.

## **Publications**

### **Implementation of Stochastic Completion Fields for Contour Completion**

University of Toronto (May 19 - Apr 21)

- [Paper](#)
- [Codes](#)
- [Supplemental Material](#)

## **Industry Experience**

### **Back-end Software Engineer**

[Coursera Inc.](#) (Sept 19 - Aug 20)

- Designed and developed a custom payments and promotions system in Scala to offer currency internationalization and discounting for [Coursera's enterprise product](#) used by over 50 organizations.
- Wrote detailed technical design documents and presentations for the systems which were used as model examples for full-time engineers.

## **Co-Curricular Activities**

### **Engineering Manager**

[University of Toronto Robotics Association](#) (Sept 19 - Apr 21)

- Led a team of 10+ students to develop navigation and path planning algorithms using the Robot Operating System (ROS) in Python for the International Ground Vehicle Competition (IGCV).

## Technical Skills

- Java (8 years)
- C/C++ (7 years)
- Python (7 years)
- MATLAB (4 years)
- LaTeX (4 years)