



Atlanta, Georgia

GEORGIA INSTITUTE OF TECHNOLOGY
IS A UNIT OF THE
UNIVERSITY SYSTEM OF GEORGIA

APPLICATION FOR GRADUATE ADMISSION

PERSONAL INFORMATION

Full Legal Name: NAGIPOGU Rajiv Teja
Last name (Family name) *First name (Personal Name)* *Middle Name* *Suffix*

Preferred First Name: Rajiv

Will we possibly receive records for you under any other name? ☐ YES ☒ NO

If yes, what name?
First *Middle* *Last*

Gender: ☒ Male ☐ Female Date of Birth: 06-09-1996 mm/dd/yyyy Place of Birth: Nellore, India

Permanent Address: Street 4-46H
Family Home Vijaya Colony, Gudali
 City Nellore, Andhra Pradesh Country India
 Mail Code 524413 Permanent Telephone 91-9092519422
 E-mail Address: rajivpensidpri@gmail.com

Current Address: This address is valid until: 06-01-2019 mm/dd/yy
Present Location Street 10th Cross Road, No 31
8th Main Rd, RMV Extn, Sadashiva Nagar
 City Bengaluru, Karnataka Country India
 Mail Code 560080
 U.S. Cellular Telephone

Degree Objective: Masters Campus: GT-Atlanta Admit Term: Fall 2019

Graduate Major: Master of Science in Computer Science - On Campus

Are you a: First-time graduate student

Have you previously applied for admission, been enrolled as a student, or been otherwise affiliated with Georgia Tech resulting in assignment of a gtID number? ☐ YES ☒ NO

gtID Number:

If your degree objective is Masters, do you plan to pursue a PhD degree in the future? ☒ YES ☐ NO

If Yes, when? Other If 'Other' please explain: I want to work for a year so that I can pay off my student loan before I enrol in a PhD program.

Are you a current Georgia Tech graduate student? ☐ YES ☐ NO

Are you seeking to CHANGE graduate degree programs or to ADD a secondary degree program?

☐ YES ☐ NO

FUNDING

Do you wish to be considered for Financial Assistance?

☒ YES ☐ NO

Do you require Financial Assistance in order to Attend Georgia Tech?

☒ YES ☐ NO

ACADEMIC HISTORY

College Code	Name of Institution	City	Attend From	Attend To	Degree	Degree Date	Major	GPA
Z84946	Indian Inst of Tech-Madras	Tamil Nadu	07-2013	05-2017	BACEQV-BTech	07-2017	Computer Science and	8.24

TEST SCORES Please indicate the date you have taken OR will take the required test(s).

TEST	DATE	V	%	Q	%	AW	%	TOTAL SCORE
GRE	11-2017	154	65	169	96	4.0	59	
GRE SUBJECT		TOPIC:						
GMAT								
TOEFL	12-2017							111
TOEIC								

RECOMMENDATIONS

The following individuals have agreed to provide recommendations on my behalf.

NAME	EMAIL ADDRESS	INSTITUTION
Chester Rebeiro	chester@cse.iitm.ac.in	Indian Institute of Technology, Madras
Sutanu Chakraborty	sutanuc@cse.iitm.ac.in	Indian Institute of Technology, Madras
Chandra Sekhar C	chandra@cse.iitm.ac.in	Indian Institute of Technology, Madras

SELF-REPORTED BACKGROUND DISCLOSURE

Georgia Institute of Technology is committed to maintaining a safe environment for all members of our community. All applicants must answer these questions. An affirmative answer to any of these questions does not automatically bar admission to the institute, but does require review. You are required to provide an explanation for each instance you answer Yes. The statement will be used in the review process.

1. Have you ever been convicted of a crime other than a minor traffic violation?

☐ YES ☒ NO

If yes, please briefly explain here.

2. Are there any criminal charges currently pending against you?

☐ YES ☒ NO

If yes, please briefly explain here.

3. Have you entered a plea of guilty, a plea of no contest, a plea of nolo contendere, an Alford plea to a criminal charge, a plea under a first offender act?

☐ YES ☒ NO

If yes, please briefly explain here.

4. Do you currently have disciplinary or academic misconduct charges pending against you from a high school, college or university?

☐ YES ☒ NO

If yes, please briefly explain here.

5. Have you ever been disciplined, suspended, or expelled for conduct code violations from a high school or post-secondary educational Institution?

☐ YES ☒ NO

If yes, please briefly explain here.

CITIZENSHIP AND ETHNICITY INFORMATION☐ U.S. Citizen☒ Non-US CitizenCountry of Citizenship (if not US): India

Do you hold citizenship in any other country?

☐ YES ☒ NO

Other Country of Citizenship: _____

Are you currently in the U.S. or will travel to the U.S. with a visa prior to your potential enrollment at Georgia Tech?

☐ YES ☒ NOIf so, what is your current Visa type? ☐ F-1 ☐ J-1 ☐ Other

Sevis ID (if available): _____

Will you require a student visa to study at Georgia Tech?

☒ YES ☐ NOIf yes, ☒ F-1 ☐ J-1

Note: *Permanent Residents are classified as Non-Citizens until a Permanent Resident Card is provided.*

The information requested below will not be used for admission purposes. The data will be used to satisfy federal reporting requirements and other purposes allowed by law.

Are you Hispanic or Latino? ☐ YES ☒ NO

Check all that categorize your race.

(Note: Regardless of your answer to the previous question, please mark one or more races to indicate what you consider yourself to be.)

- ☐ White
- ☐ American Indian or Alaskan Native
- ☒ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Black or African American

RESIDENCY (Required for US/PR only – International applicants please leave blank)

US State of Legal Residence _____

If GEORGIA, Country of Residence _____

If you consider yourself a legal resident of the State of Georgia (US), do you expect to receive in-state tuition fee rates?

☐ YES ☐ NO

NOTE If YES, you will be required to complete the Georgia Residency Application which is a part of this application. Once received, your credentials will be evaluated and a notation of your residency status will be entered in the applicant data- base and will appear on Status Checking.

All persons admitted to institutions of higher learning in the State of Georgia will be required to submit documentation proving that they are lawfully in the United States. If an applicant wishes to be considered for in-state tuition rates, he/she must also present

U.S. MILITARY INFORMATION

Are you currently active duty, a veteran, member of the National Guard or Reservist in the US Armed Forces?

☐ YES ☒ NO

If yes, please specify. _____

If Active Duty, which Branch? _____ Home of Record State? _____

Are you the spouse or dependent child under the age of 24 of someone who is currently active duty, a veteran, member of the National Guard or Reservist in the U.S. Armed Forces? ☐ YES ☒ NO

NON-U.S. MILITARY/GOVERNMENT INFORMATION

Are you currently active duty, veteran, a member of the National Guard, or a Reservist in any Non-US Military armed force? ☐ YES ☒ NO

Country: _____

Branch: _____

Are you currently employed or on leave from any Non-US Government Agency? ☐ YES ☒ NO

Country: _____

Agency/branch: _____

ADDITIONAL INFORMATION

Are you currently enrolled in any other Educational Institutions? ☐ YES ☒ NO

Country: _____

Name of Institution: _____

Are you currently employed or on leave of absence from employment? ☐ YES ☒ NO

Country: _____

Name of Company: _____

CERTIFICATION

I certify that the information provided in this application is true and complete. I understand that omission or misrepresentation herein may result in automatic rejection of my application to Georgia Tech. If admitted, I agree to abide by the Rules and Regulations of the Academic honor Code of the Georgia Institute of Technology.

Signature of Applicant Rajiv Teja NAGIPOGU Date 02-01-2019

PART 4 GEORGIA TECH MASTERS IN COMPUTER SCIENCE APPLICATION

Name: Rajiv Teja NAGIPOGU

Note: This program only admits in the Fall term. The application deadline is February 1 for admission the following Fall term. We do not guarantee we will be able to read or respond to late applications. To meet deadline, only the online application is required -- supplemental material may follow.

1. Indicate your first and second choice of interest area for your graduate study and research.

First Choice

Computational Perception and Robotics

2. ☒ Yes ☐ No Have you taken the GRE General Test (required)?

Date taken or date to be taken? 11-2017

Scores: Verbal	<u>154</u>	raw	<u>65</u>	%
Quantitative	<u>169</u>	raw	<u>96</u>	%
Analytical Writing	<u>4.0</u>	raw	<u>59</u>	%

3. ☐ Yes ☐ No Have you taken a GRE Subject Test?
(check program website for requirements)

If yes, which subject test did you take? _____

Date taken or date to be taken? _____

Scores: Subject Test _____(raw) _____(%)

4. ☒ Yes ☐ No Have you taken the Test of English as a Foreign Language (TOEFL) (required of all International Applicants)?

Date taken or date to be taken? 12-2017

Score: 111 (total)

5. Awards and Recognitions

List all scholastic, community, and professional awards received during your undergraduate or graduate education.

[illegible]

6. List all **fellowships and scholarships** for which you have applied and the status of that application (required).

[illegible]

7. List **other graduate programs** to which you have applied. (optional)

[illegible]

8. List any **research publications** you have had published. Be clear to specify the format of the publication (conference paper, workshop paper, journal paper, etc.).

Title	Published In
[conference paper] Suggesting tangentially related concepts for Wikipedia Articles	5th International conference in Mining Intelligence and Knowledge

9. Briefly describe your eventual **career objective**. Your space is limited to 150 characters (e.g., University Professor, Industry Researcher, etc.).

I wish to engage in teaching and research as a University professor.

10. Please describe your **background** (academic and extracurricular) and experience, including research, teaching, industry, and other relevant information. Your space is limited to 2000 characters.

I acquired my Bachelor's degree in 2017 from the Department of Computer Science and Engineering at Indian Institute of Technology, Madras with a GPA of 8.2 out of 10.

As a sophomore, I developed a Chess engine by implementing an improvised Minimax algorithm with Alpha-Beta pruning. I also designed a customized scoring function to emulate human-like behavior.

As an engineering intern at Flipkart, I learned how a product is designed, tested and brought into the market as I worked on introducing a feature into their application. I also worked on improving the relevance of search results by optimizing the weights assigned to various user insights such as the click-through rate.

As a part of the Natural Language Processing course, I worked on a research problem of 'Suggesting see-also links to a Wikipedia page'. For this purpose, I developed two new similarity measures for ranking the candidates. First similarity measure can be thought as a web-based co-citation measure and the second one is based on the hyperlink distance between two Wikipedia pages. Suggestions produced by our method were an improvement over the existing state-of-the-art and this resulted in our work getting published in the MIKE-2017 conference.

For my undergraduate project, I worked on building a standalone web server completely in Rust. I built a custom kernel and a network stack on top of it by writing a kernel driver for the RTL8139 ethernet device. The project was among the earliest attempts in writing a standalone server in Rust and got featured in the community's newsletter.

For the past year, I worked as a software engineer at PayPal, where I was responsible for the health and maintenance of more than two thousand Unix servers that run critical applications. During this stint, I gained experience in the areas of system administration and automation by devising tools that reduced the ETA of previously manual operations from hours to a few minutes.

Statement of Purpose

The question I want to study is as follows: How can we delineate the intricate mechanisms responsible for the intelligence of a being and leverage this knowledge to build intelligent agents? An intelligent agent can be any system that can learn, adapt and function autonomously to accomplish its tasks. Intelligence is often assumed to be a complex overlay of mechanisms such as perception, knowledge organization, retrieval, and inference. In this regard, the sophistication of biological systems such as the human brain exceedingly surpasses the models created by us to exhibit similar behaviors. For example, it takes just one image of a handwritten digit for us to identify the digit when presented in a different context, whereas a deep learning model needs to be trained with hundreds of images along with different variations of this digit to be able to replicate this behavior. Examples that speak to this sophistication can also be furnished in domains such as Language, Speech and even Inference. Enthusiasm to understand the science behind this sophistication has motivated me to pursue this field. Thereby, going forward, I wish to work on modeling these seemingly intricate mechanisms and explore ways to combine them to build intelligent machines. In addition, I also want to explore how and why did this intelligence evolve from primitive life forms to the present day humans as it is my strong belief that examining simpler systems often exposes a way to model more complex behaviors.

My interest in this field accreted from various sources. My original interest in computer science developed because of my fascination with programming. I was thrilled by the fact that I was able to make a computer solve problems by encoding my thought processes into it. To satiate this interest in programming I took to writing a Chess engine, which introduced me to the world of Artificial Intelligence. Since then, courses in Artificial Intelligence, Knowledge Representation, and Pattern Recognition have fostered my interest by allowing me to look at the field from varied perspectives. The project I did as a part of my Natural Language Processing course was a great influence on my research interests. For this project, I devised two new similarity measures to estimate the relevance between two Wikipedia concepts. The produced results proved to be an improvement over the current state-of-the-art and led to our work getting published in the MIKE-2017 conference. This instilled in me the confidence to pursue a career in research.

Through my masters, I want to get a thorough grounding in the Artificial Intelligence domain by taking up courses in diverse areas such as Perception, Language Understanding, Computer Vision and Robotics and identify which areas excite me the most. I also look forward to working in a research group on exciting projects to get a feel for what research in the field is like.

I believe that the College of Computing is a perfect place for me due to its rich assortment of faculty working in diverse areas of Artificial Intelligence. Also, the flexibility to choose a specialization and to opt for a thesis centric Masters, which may not be the case with other schools, is something that deeply excited me to apply to this program. I am especially enthusiastic to work with the Machine Learning and Perception Lab as my research goal of incorporating inference capabilities of humans into machines closely relates to the kind of work being done in the lab. In addition, I would be equally fortunate to work with Prof. Charles Isbell in the Laboratory of Interactive Intelligence or with Prof. Devi Parikh in her Visual Intelligence Lab.

In the future, I hope to work in the intersection of fields such as Artificial Intelligence, Biology, and Cognitive Sciences. Specifically, I wish to study the internal organization of complex biological systems and use them as blueprints to build intelligent machines.