# Timothy Thomas George

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**Contact Information**

**Email**: timgeorge27@hotmail.com     **Website**: timg27.github.io

**Phone**: (+91) 8137934270     **LinkedIn**: timothytg27

**GitHub**: TimG27     **GoogleScholar**: Timothy Thomas George

## Summary

- B.Tech Computer Science & Engg., VIT Chennai (2024); Rank #2 in Class of 2024.
- Experience at research labs at the University of Calgary and VIT Chennai.
- Co-authored 2 peer-reviewed publications, 1 book chapter, and 2 conference papers.

## Education

**Vellore Institute of Technology**, Chennai, India     Sept 2020 - May 2024

*B.Tech. Computer Science and Engineering*     *GPA: 9.73*

## Research Experience

**University of Calgary**, Calgary, Canada

*Summer Research Intern*     May 2023 - July 2023

Supervisor: Dr. Roberto Souza

- Evaluated the role of image processing in domain adaptive deep learning models.
- Investigated image registration and MR visualization using ITK-Snap.

**Vellore Institute of Technology**, Chennai, India

*Summer Research Intern*     May 2022 - July 2022

Supervisor: Dr. Karthik R.

- Developed a novel deep learning model for endoscopy image classification.
- Published a peer-reviewed paper demonstrating our model's superior performance.

## Teaching Experience

**Vellore Institute of Technology**, Chennai, India

*Undergraduate Teaching Assistant*     Fall 2023

- Mentored 15 Year-2 students taking the Computer Networks (BCSE308L) course.
- Conducted 18 hours of tutorials, prepared quizzes and distributed assignments.

[YouTube]

## Peer-reviewed Publications

Karthik, R., Hussain, S., **George, T. T.**, & Mishra, R. (2023). A dual track deep fusion network for citrus disease classification using group shuffle depthwise feature pyramid and Swin transformer. *Ecological Informatics*, *78*, 102302.

[doi]　[GitHub]

Ramamurthy, K., **George, T. T.**, Shah, Y., & Sasidhar, P. (2022). A novel multi-feature fusion method for classification of gastrointestinal diseases using endoscopy images. *Diagnostics*, *12*(10), 2316.

[doi]

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| Book Chapters | Tyagi, A. K., **George, T. T.**, & Soni, G. (2023). Blockchain-Based Cybersecurity in Internet of Medical Things (IoMT)-Based Assistive Systems. In *AI-Based Digital Health Communication for Securing Assistive Systems* (pp. 22-53). IGI Global.<br>[doi] |

Conference
Publications

Madhavan, S. R., **George, T. T.**, Jerusha, Y. A., &; Syed Ibrahim, S. P. (2023, March). International Conference on intelligent COMPUting TEchnologies and Research (i-COMPUTER 2023). In *Book of Abstracts* (pp. 122–123). Karaikal, India.
[Paper]

**George, T. T.**, & Tyagi, A. K. (2022, January). Reliable Edge Computing Architectures for Crowdsensing Applications. In *2022 International Conference on Computer Communication and Informatics (ICCCI)* (pp. 1-6). IEEE.
[doi]

Projects

**Newborn MRI Reconstruction: Translating Adult-Trained Models**
• Tested a deep-learning MRI Reconstruction model for domain adaptability.
• Evaluated models against a baseline and applied image processing techniques.
*University of Calgary, Calgary, Canada*          Aug 2023
[Github]

**Precision Data Mining for Protein Database Development**
• Designed and implemented Python scripts to extract crucial data from websites.
• Partnered with a PhD candidate and a Data Scientist in a collaborative effort.
*Vellore Institute of Technology, Chennai, India*          Oct 2023
[Github]

**Collaborative Real-time Web Development using MDWE and Deep Learning**
• Introduced a deep-learning technique that allows generative web app development.
• Calculated a reduction in the overall development time and effort with our method.
• Developed a prototype platform using ReactJS, Socket.IO, and Flask.
*Vellore Institute of Technology, Chennai, India*          Nov 2022

**Parallel implementation of MobileNetV2 for real-time images**
• Introduced a parallel procedure for speedy Face Mask Detection by MobileNetV2.
• Reported the performance of 'Numba' and 'Multiprocessing' using our method.
*Vellore Institute of Technology, Chennai, India*          Nov 2022

Seminars

**"Research with Mendeley Tools"**          *Duration: 1 hour*
• Tutored a Year-1 class on integrating Mendeley with their preferred writing software.
• Answered general queries about undergraduate research writing.
*Vellore Institute of Technology, Chennai, India*          14 Sept 2022

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| Fellowships and Awards | **Mitacs Globalink Research Fellowship (for Globalink Interns)** |
| | Awarded to all accepted students participating in Mitacs Globalink Research Internship and covers most expenses during the 12 weeks of the internship. May 2023 |
| | **VIT Meritorious Award** (Academic Excellence) |
| | Awarded to the ten highest academically performing students (top 2%). |
| | *Vellore Institute of Technology, Chennai, India* Jan 2023, Jan 2022 (twice) |
| Extracurriculars | **Summer Program - "Sustainability and Development: Tamkang to the World"** |
| | • Engaged in discussions on technology, economics, and culture in the 21st century. |
| | • Interacted with global peers representing 10+ countries, gaining insights into Far East Asian language, cuisine, and history. July 2022 |
| | **Volunteering - ENACTUS VIT Chennai Chapter** |
| | • Spearheaded marketing of a greatly successful scrunchies sale on campus. |
| | • Teamed up on a donation campaign to gift hand-woven ornaments to 100+ schoolgirls at the AP Tribal Welfare Girls School, Narasaraopet. Jan 2022 |
| Professional Memberships | **Open Web Application Security Project (OWASP)** 2021 - present |
| | • Initiated outreach for collaborations on chapter activities with 15+ companies and NGOs. |
| | • Coordinated event management efforts for the chapter's cybersecurity event throughout the year. |