Priya Govindasamy

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EDUCATION

University of California, Irvine   Irvine, California, USA
Ph.D. in Computer Science   GPA: 4.0 (3 quarters)   September 2023-Present

Vellore Institute of Technology   Vellore, Tamil Nadu, India
Bachelor of Technology in Computer Science & Engineering CGPA: **9.59/10.0** (6 semesters)   June 2019–Present
Relevant Courses: Data Structures & Algorithms, Operating Systems, Cybersecurity, and Machine Learning

Kendriya Vidyalaya, Indian Institute of Science Bengaluru, Karnataka, India

Grade XII   **96.2%** in English, Maths, Physics, Chemistry, Computer Science   May 2019

Grade X   **10** CGPA in English, Sanskrit, Maths, Science, and Social Science   May 2017

RESEARCH EXPERIENCE

University of California, Irvine   Irvine, California, USA
Ph.D. in Computer Science program at University of California, Irvine   September 2024– Present
- *Project – BPF Lock: Identifying vulnerabilities in the eBPF subsystem*
- *Advisor – Prof. Ardalan Amiri Sani*
- Performing analysis to determine the execution context of helper functions and kfuncs used in the eBPF subsystem. Design and implementation of a tool that uses static analysis to check whether spinlocks and sleeping functions are used in the correct context in the eBPF subsystem.

University of California, Irvine   Irvine, California, USA
REU program at University of California, Irvine   June 2022 – August 2022
- *Project – Two factor authentication and localization scheme for autonomous vehicles*
- *Supervisors – Prof. Marco Levorato, Anas Tarik M*
- Provided an implementation of a theoretical concept to improve security in autonomous vehicles. Built a test bed using raspberry pi that uses an LED to send messages in binary. Wrote a python program using computer vision algorithms to perform detection and tracking of an LED that sends a message in binary.

INTERNSHIPS

Internship at All-e-Tech   Pune, Maharashtra, India
Software Engineering Internship at All-e-Tech   May 2021 – July 2021
- *Project – Simulation of Deployment of Unified Threat Management in a company environment.*
- Assisted in installing and configuring Microsoft Bitlocker Administration Monitoring (MBAM) software. The deployment of this software was simulated on both server and client computers.
- *Supervisor – Mr. Rajan Gaba*

PROJECTS

Vellore Institute of Technology   Vellore, Tamil Nadu, India

Data Structures and Algorithms   December 2019 – May 2020
- *Project – DNA comparison using KMP algorithm*
- *Supervisor – Prof. Parveen Sultana*

- A 'C' program to allow the user to input two strands of DNA and find the percentage similarity between them as well as identify whether a particular characteristic is present in the DNA.

Internet of Things   July 2020 – December 2020
- *Project – Home Security System using Internet of Things*
- *Supervisor – Prof. Deepa K*
- An embedded system which uses Arduino and various sensors attached to it. Its purpose was to alert the user if intruders, fire or excessive amounts of gas are detected. A notification would be sent to the user's phone using GSM module SIM-900A and a buzzer module would ring as an additional notification.

Operating Systems   July 2020 – December 2020
- *Project – Study of File Systems*
- *Supervisor – Prof. Jothi K.R.*
- Tabular comparison of different file systems used in Windows and Linux. Comparative study of three file allocation methods. C program to show the implementation of a file system

Database Management Systems   July 2020 – December 2020
- *Project – Hostel Management System*
- *Supervisor – Prof. Santhosh Kumar*
- Design and implementation of a database to store details of students living in a hostel as well as the user interface for it.

Cybersecurity   December 2021 – May 2022
- *Project – Operating System Malware Detection*
- *Supervisor – Prof. Rajesekhara Babu*
- Used machine learning models such as naive Bayes, random forest, gradient boosting, AdaBoost, and decision tree to determine whether a particular file is malware.

Web application development using MERN stack   July 2021
- *Project – Simple notes application that allows user to create, view, edit and delete notes*

TEST SCORES

Graduate Record Examination (GRE)   January 6th 2022
- *Total score:* **333/340**
- *Verbal reasoning:*   **163/170** (92nd percentile)
- *Quantitative reasoning:*   **170/170** (96th percentile)
- *Analytical Writing:* **5/6** (91st percentile)

Test of English as a Foreign Language (TOEFL)   May 25th 2022
- *Total score:* **116/120**
- *Reading:*   **30/30**
- *Listening:*   **30/30**
- *Speaking:*   **28/30**
- *Writing:*   **28/30**

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java

Front-end Software Development: HTML, CSS, vanilla JavaScript

Others: MATLAB, SQL, Bash, PHP, embedded system development for Raspberry Pi and Arduino, eBPF program development

ACHIEVEMENTS

- One of the top 10 students out of 2000 students in computer science and engineering in VIT.
- Programme Representative for the CSE branch during the year 2021-2022 year due to excellent academic achievements.
- Recipient of the merit scholarship from VIT during the years 2019-2020 and 2020-2021
- Ranked in the top 1.5% of all India Kendriya Vidyalaya candidates in 12th Central board examinations. Ranked 1st at the school level.
- Qualified for 2nd level National Science Olympiad (NSO) and International Mathematics Olympiad (IMO). (2016)
- Performed Social Service in association with 'HelpAge India' and 'The Desi Cows for Better India Trust'.
- Part of the Green Ambassador project by Schneider Electric.
- Member of LEO club in affiliation with Lions club. (2019-present)
- School first in International English Olympiad. (IEO) (2010)