Nithyashree Senguttuvan
Curriculum Vitae

Personal Details

Surname	Senguttuvan
Given names	Nithyashree
Date of birth	January 30, 2000
Place of birth	Thanjavur, TamilNadu, India
Marital status	Single

Contact Information

Address	1425 NE Valley Rd, Apt. #13, Pullman, WA, USA - 99163
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Work Experience

Graduate Teaching Assistant

01/2023 - 05/2024

Washington State University, Pullman, United States of America

Demonstrated adeptness in educational support and facilitation within the realm of computer science.

● Collaborated closely with esteemed professors such as Prof. Bolong Zeng, Prof. Yan Yan and Prof. Jeremy Thompson to ensure smooth execution of course activities and student support.

● Leveraged expertise to conduct research and enhance assignments for System Programming Java, showcasing a commitment to continuous improvement and innovation in educational practices.

● Led students through hands-on lab activities for the System Programming Java course, cultivating practical skills and reinforcing theoretical concepts in a dynamic learning environment.

Junior Engineer

06/2021- 08/2022

AstraZeneca, Chennai, India

Managed quality and compliance throughout the change and document management process associated with SAP (an Enterprise Resource Planning Platform) for pharmaceutical production.

● Contributed to the Process Periodic Review in Jan 2022 and Jul 2022 to ensure the seamless workflow.

● Implemented the Data Stewardship Platform, a comprehensive data management software, within a collaborative environment to oversee, organize, design, and construct data life cycles that foster active

collaboration with business users, ensuring streamlined data handling and management processes.

Education

08/2022 - 05/2024

Master of Science in Computer Science

Washington State University, Pullman, United States of America

(Grade: 3.82/4, Class rank - 3)

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Education (continuation)

08/2017 – 03/2021	Bachelor of Engineering in Computer Science Engineering
	Sri Krishna College of Technology, Coimbatore, India
	(Grade: 9.44/10, Department Rank: 1, out of 167 students)
03/2017	Higher Secondary Certificate
	Premier Vidyaa Vikash Matriculation Higher Secondary School, Coimbatore, India
	(Grade: 94.5%, Class rank - 3)
04/2015	Secondary School Leaving Certificate
	Chinmaya Vidyalaya Matriculation Higher Secondary School, Coimbatore, India
	(Grade: 97.6%, Class rank - 2)

Internships

Content Writer

06/2020 – 12/2020	Nanban Tech Ventures, Coimbatore, India
	Responsible for content related to Nanban marketplace blog and social media posts.

Market Research Intern

07/2020	Zinnov Management Consulting Private Limited (Draup), Coimbatore, India
	Responsible for Data preparation and collection from various resources

Training

05/2023 - 07/2023	Techzy IT Solutions, Coimbatore. Tamilnadu
	Applied Data Science and Machine Learning fundamentals with Python proficiently in a live project during
	internship, translating theoretical concepts into practical solutions.
05/2019	Tata Elxsi, Bengaluru. Karnataka
	Application of Artificial Intelligence (Deep Neural Networks) for Autonomous Vehicles - Learnt from the basics of Artificial Intelligence starting from Artificial Neural Networks to Deep Neural Networks and it's application on vehicles
12/2018	Uniq Technologies, Coimbatore. Tamilnadu
	Software basics about Photoshop - editing, Dreamweaver – static website creation, Android Studio, and Flash - features were learnt with a theory class on Software development life cycle

Awards

2022	Honor of Merit 2017 - 2021, Sri Krishna College of Technology, Coimbatore, India
2020	National Programme on Technology Enhanced Learning (NPTEL) Discipline Star, Indian Institute of Technology (IITs), India
2020	Certificate of Merit for the year 2019 – 2020, Sri Krishna College of Technology, Coimbatore, India
2018	Certificate of Merit for the year 2017 – 2018, Sri Krishna College of Technology, Coimbatore, India

Exams

02/2023	International Teaching Assistant Evaluation
10/2021	Graduate Record Examinations
08/2021	Test of English as Foreign Language
03/2021	Tamil Nadu Common Entrance Test
02/2021	Graduate Aptitude Test in Engineering

Memberships

08/2022 - 05/2024	Graduate Society of Women Engineers, Washington State University
04/2021	International Association of Engineers - 283521
03/2021	IEEE Student Membership - 97649313
04/2020	Google Developer Group, Coimbatore

Publications [# = shared first authorship; * = (shared) corresponding author]

- N. Nalini#, K. S.Thangamani, V. Geethalakshmi, **S. Nithyashree***. Innovative nanosensors for detection of dyes, *Nanotechnology-Based Sensors for Detection of Environmental Pollution*. 2024
- Vigneshwaran Namasivayam#,**Nithyashree Senguttuvan#**,Venkatesan Saravanan,Senthilkumar Palaniappan,Muthu Kumaradoss Kathiravan. Artificial Intelligence and its Application in Cardiovascular Disease Management, *Machine Learning and Systems Biology in Genomics and Health. 2021*

Proceedings

- Kayalvizhi N#,Kiruthika P#,**Nithyashree S#**,Padmavathi S, *Cardiovascular Disease Prediction by Particle Swarm Optimization*, Ninth International Conference on Contemporary Engineering and Technology (ICCET 2021), Chennai. India. 10th and 11th April 2021
- Kayalvizhi N#,Kiruthika P#,**Nithyashree S#**,Padmavathi S, *Coronary Artery Disease Prediction by Unsupervised Learning and Particle Swarm Optimization*, First International Conference on Next Generation Computing Systems (ICNGCS 2021), Coimbatore. India. 27th March 2021
- Kiruthika P#,**Nithyashree S*,**Poornima S*, *Preparation of Paperduino,* Elements 2K19, Coimbatore. India. 25th September 2019.
- Kesavananthini M#,Maharaja D#, **Nithyashree S#,***Survey paper on Generative Adversarial Neural Networks,* Sixth National Conference on "Recent trends in Computer Science", Chennai. India. 13th September 2019.

Projects and Idea challenges

- **Exploring and Visualizing Personal Music Trends with Spotify** a Elements of Network Science Project for the coursework in Washington State University, Pullman. United States of America. 30th April 2024.

  Project-Conducted thorough analysis utilizing the Spotifyr package and Spotify API within the R programming environment. Delved into comprehensive data exploration and interpretation to extract valuable insights. Employed advanced techniques to gain nuanced understanding and inform strategic decision-making.

- **Comment Toxicity Identification model** a Neural Network Design and Application Project for the coursework in Washington State University, Pullman. United States of America. 18th April 2024.

  Project-Created an advanced Neural Network model proficient in accurately detecting and categorizing comment toxicity levels. Showcased expertise in utilizing natural language processing techniques to tackle modern challenges in online content moderation with Gradio API.

- **SRS and Anomaly detection on ECG data** a research project in Washington State University, Pullman. United States of America. 15th May 2024.

  Project-Actively conducted rigorous educational research on Anomaly Detection Techniques (Isolation forest) using active learning and Application of Seasonal Ratio Score using Autoencoders in healthcare applications under the guidance of Prof. Venkata Janardhan Rao Doppa.

- **Music Genre Classification** a Machine Learning project for the coursework in Washington State University, Pullman. United States of America. 2nd December 2022.

  Project-Developed a classification project utilizing the K-Nearest Neighbors (KNN) method to categorize music genres within the GTZAN dataset. Implemented feature analysis across ten distinct genres to accurately classify music samples, demonstrating proficiency in machine learning techniques and dataset manipulation.

- **Uncovering "The Great Resignation"** a Data science project for the coursework in Washington State University, Pullman. United States of America. 9th December 2022.

  Project-Developed a Machine Learning model to analyze attrition rates and their impact across various industries.

Projects and Idea challenges (continuation)

- **MyGov COVID-19 Sri Shakthi Challenge** organized by Sri Shakthi Institute of Engineering and technology, Coimbatore, India and My Government, India. 1st May 2020. And **IBM – Call for Code** conducted by IBM, India. 27th April 2020.

  Idea-A data analytic model "COVID-19 Outbreak Prediction" was to be developed using Pytorch and Jupyter Notebook which communicates through Slack and IBM Watson Chatbot was proposed.

- **Smart India Hackathon 2020** is an event organized by the Central Government of India, Delhi and won the "Internal Hackathon" conducted at Sri Krishna College of Technology, Coimbatore. India. 21st February 2020.

  Project-A deep learning model was developed with the help of Keras, TensorFlow, Python, Nvidia which communicates through Slack and Twilio, with the analysis done by PowerBI to detect criminals through CCTV footage by recognizing their face, expression and gesture, and presented.

- **MIT Hackathon**, Samhitha 2020 organized by Madras Institute of Technology, Chennai. India. 31st January 2020.

  Project- A data analytic model for Questionnaire Analysis was developed in Google Colab and presented.

- **Mobility Hackathon 2019** an event organized by Atal Incubation Centre, Government of India and held at EMPI institutions, Delhi. India. 9th November 2019.

  Project-An updated application of Nissan Connect was developed in Android Studio and presented.

- **Smart SKCT Hackathon** held at Sri Krishna College of Technology, Coimbatore. India. 24th September 2019.

  Project-An application for our college food court and shops was developed in Android Studio and presented.

- **Smart India Hackathon 2019** an event organized by the Central Government of India, Delhi. India. 15th March 2019.

  Idea-An idea of medical drone by embedded systems concept to carry medicinal supplies to hilly regions was proposed.

Thesis

Nithyashree S, Cardiovascular disease prediction using particle swarm optimization. Bachelor of Engineering Thesis 2021

Course

SWAYAM – NPTEL - National Programme on Technology Enhanced Learning, IIT(Kharagpur,Madras) (October 2018)

- Problem-solving through programming in C-Elite

- C++ Programming

(April 2019)

- Joy of Computing using Python-Elite

- Database Management System-Elite

- Computer Architecture and Organization

(November 2019)

- Programming in Java-Elite

(April 2020)

- Data Analytics with Python

(December 2020)

- Recognized as "NPTEL DISCIPLINE STAR"

Course (continuation)

Indian Institute of Remote Sensing, Indian Space Research Organization, Department of Space, Government of India
(December 2018)
An online course on "Satellite Remote Sensing in Agrometerological Applications" was completed at IIRS outreach Centre, Sri Krishna College Of Technology, Coimbatore.

Progate, Cinnabar Hills, Challaghatta, Bengaluru. Karnataka
(December 2019)
Reached level 310 by completing basic courses on Go, JavaScript, Saas, JQuery, Command Line, Ruby, Python, Java, SQL and React.

Cisco –Networking Academy, *Anna University, Kotturpuram, Chennai. Tamilnadu*
(March 2020)

- Programming Essentials in Python

(April 2020)

- Introduction to Cyber security

(May 2020)

- Introduction to IOT

- Cyber security Essentials

- NDG Linux Essentials

- Introduction to Packet Tracer

- Entrepreneurship

Skillrack – online learning platform
(March 2020)

- C – Programming Course

(April 2020)

- Java Basics – Programming Course

- Python 3.x – Programming Course

- SQL – Basics(Standard)

TCS ION, Digital Learning Services, *Bengaluru. Karnataka*
(May 2020)
Completed a 15 days course on various types of skills required for an employee and an overview of Artificial Intelligence by the topic "Career Edge – Knockdown the Lockdown".

Datacamp, New York. United States
(May 2020)

- Introduction to Python

- Introduction to SQL

Mathworks, Etamin Block, Bengaluru. Karnataka
(May 2020)

- Deep Learning Onramp

- Machine Learning Onramp

Udemy, Gurgaon. Haryana
(June 2020)

- Java Programming: Complete Beginner to Advanced

Course (continuation)

Coursera, Gurugram. Haryana
(June 2020)

- Getting Started with AWS Machine Learning
- Programming for Everybody (Getting Started with Python)

Wipro NASSCOM FutureSkills, Coimbatore. Tamilnadu
(February 2021)
- Fundamentals of Communication

(November 2020)
- Basics of Cloud Computing

(June 2020)
- IOT Foundation

(January 2020)

- Foundational Artificial Intelligence

Qwiklabs, Cambridge. United States of America
(November 2020)
- Getting Started: Create and Manage Cloud Resources
- Baseline: Data, ML, AI
- Perform Foundational Data, ML and AI Tasks in Google Cloud
- Insights from Data with BigQuery
- Explore Machine Learning Models with Explainable AI
- Perform Foundational Infrastructure Tasks in Google Cloud
- Build and Secure Networks in Google Cloud
- Engineer Data in Google Cloud
- Integrate with Machine Learning APIs

Guinness World Records, New York. United States of America
(May 2021)
- AI for India

Percipio, AstraZeneca, Chennai. Tamilnadu
(June 2022)
- Technical Writer Journey

Google for Developers, Cambridge. United States of America
(December 2022)
- Visualize Data on Google Maps Platform
- Get Started with Google Maps Platform - Web
- Advanced Google Analytics
- Google Analytics for Beginners

(January 2023)
- Google Analytics for Power users

Databricks, San Francisco. United States of America
(March 2024)
- Get started with Databricks for Machine Learning
- Get started with Databricks Platform Administration
- Get Started with Data Analytics for Databricks

(April 2024)
- Get Started with Databricks for Data Engineering
- Get Started with Databricks for Business Leaders
- Generative AI Fundamentals
- Databricks Fundamentals

Quiz

- **National Level Online Python Quiz (Expert Level)** conducted by MHM's Outcome Based Education. 20th September 2020.
- **International e-Quiz on Artificial Intelligence and Machine Learning** conducted by Jansons Institute of Technology, Coimbatore. India. 10th July 2020.
- **Proficiency Test in English** conducted by Department of English of VET institute of Arts and Science, Erode. India. 20th June 2020.
- **Initialism of short words in Computer Science** conducted by Mahendra Institute of Technology, Namakkal. India. 6th June 2020.
- **Web Programming** conducted by Kongunadu College of Engineering and Technology, Trichy. India. 28th May 2020.

Technical Events

- **Walmart CodeHers 2021** organized by Walmart Global Tech, India. 13th June 2021.
- **The Guinness World Record Event** – Most users to take an online computer programming lesson in 24 hours by GUVI, Chennai. India. 24th and 25th April 2021.
- **Introduction to Data Science and its Opportunities** organized by Gnanamani College of Technology, Namakkal. India. 29th May 2020.
- **India First Leadership Talk** broadcasted by MHRD's Innovation Cell, Delhi. India. 9th May 2020.

Technical Events (continuation)

- **Cisco NetAcad – ISTE National Level Codathon – 2020** held online and got selected up to 2nd Level conducted by Cisco Networking Academy and Eduskills, India. 21st April 2020.
- **Go crazy with Flutter** conducted by Learn with Community, Google Developer Group, Coimbatore. India. 20th April 2020.
- Tech events at **Samhita'20** held at Madras Institute Technology, Chennai. India. 31st January and 1st February 2020.
- **Placement training workshop**, Madras Institute of Technology, Chennai. India. 31st January 2020.
- **DST and Texas Instruments India Innovation Challenge Design Contest 2019** conducted by AICTE and anchored by NSRCEL. December 2019
- **Tech hunt** – Third place, organized by Sri Ramakrishna Engineering College, Coimbatore. India. 25th September 2019.
- **Engineers Day 2019** project presentation at Sri Krishna College of Technology, Coimbatore. India. 14th September 2019.
- **Python Django workshop**, Sri Krishna College of Technology, Coimbatore. India. September 2019.
- **IBM Cloud workshop on Chatbot**, Sri Krishna College of Technology, Coimbatore. India. September 2019.
- **Python workshop**, Madras Institute of Technology, Chennai. India. 2nd February 2019.
- **Placement training workshop by Amazon**, Madras Institute of Technology, Chennai. India. 1st February 2019.
- Tech events at **Samhita'19** held at Madras Institute Technology, Chennai. India. 1st and 2nd February 2019.
- **Android workshop** by Uniq Technologies, Coimbatore. India. 15th December 2018.
- **Android with KOTLIN**, Kumaraguru College of Technology, Coimbatore. India. 10th February 2018.
- **Engineers Day 2017** project presentation at Sri Krishna College of Technology, Coimbatore. India. 22nd September 2017.

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Talks

Nithyashree S, How to succeed in Gate?, a webinar to encourage and guide students in Sri Krishna college of Technology to take up Graduate Aptitude Test in Engineering. 27th May 2021.

Volunteer Experience

12/2022 - 05/2024	International Student Peer Mentor

Skills

Languages	Tamil (native language); English (business fluent); German (basics);
Leader	Class representative, Graduate Project Team Leader in Hackathons and college projects, Mentor Volunteer Experience
Computer skills	C, Java, Python, R, SQL (advanced) C++, HTML, CSS, Javascript - React, Go (Basics) Artificial Intelligence – Convolutional Neural Networks - Image classification, Linear classification, optimization; Deep Convolutional Networks, Large Language Models Data science – Data collection, Data preparation, Exploratory Data Analysis, Naive Bayes, Particle Swarm Optimization, Data Visualization Machine Learning - Anomaly Detection Techniques, Isolation Forest, Autoencoders, Scikit Learn, Tensorflow, Pytorch, Model Evaluation and Validation Techniques Microsoft Office, Microsoft Excel, Photoshop, Android Studio, Power BI, Tableau, Azure Databricks, GCP

Hobbies

Content writer, Dance(Classical–Bharatanatyam), Yoga, Music(Singer), Art(Painter), Team sports(Kho Kho, Throwball), Athletics(Running, Long jump)