

# Vineeth NC

[ncvineeth97@gmail.com](mailto:ncvineeth97@gmail.com) | [v1neethnc.github.io](https://v1neethnc.github.io) | Baltimore, MD

## Skills

---

**Languages:** Python, C, Go, SQL (MySQL, Oracle, Redshift), HTML/CSS  
**Fields:** Machine Learning, Data Visualization, Data Science  
**Tools:** Git, Amazon Redshift, Amazon Quicksight, VS Code, Jupyter, MySQL Workbench  
**Libraries:** Pandas, NumPy, Matplotlib, Scikit-learn, Keras, Tensorflow, Seaborn  
**Others:** Adobe Premiere Pro CC 2015, Adobe Audition CC 2015, Audacity

## Education

---

<b>University of Maryland, Baltimore County</b> <i>Master of Science in Computer Science</i>	Baltimore, MD Aug. 2021 – Present
<b>Birla Institute of Technology and Science</b> <i>Diploma in Artificial Intelligence and Machine Learning</i>	Hyderabad, India Apr. 2019 – Apr 2020
<b>Jawaharlal Nehru Technological University - Hyderabad</b> <i>Bachelor of Technology in Computer Science</i>	Hyderabad, India Jun. 2014 – Jun 2018

## Experience

---

<b>Research Associate</b> <i>IT Wizlab</i>	Oct. 2018 – Mar. 2020 Hyderabad, India
<ul style="list-style-type: none"><li>• Authored beginner and specialized courses for Python and Machine Learning.</li><li>• Worked on the company's Learning Management System and wrote 1000+ Python and Machine Learning codes.</li><li>• Wrote beginner courses for: Regression, Feature Engineering, Supervised Learning and Classification.</li><li>• Handled sysadmin work for a network of about 50 systems.</li></ul>	
<b>Data Engineer – Intern</b> <i>Amazon Development Centre</i>	Jun. 2017 – Jun. 2018 Hyderabad, India
<ul style="list-style-type: none"><li>• Scripted ETL code to perform optimal database migration of tables totalling over 100 million rows of data.</li><li>• Studied existing relational databases on Oracle to design counterpart for Amazon Redshift.</li><li>• Built 30+ reports and analyses on Amazon Quicksight based on Redshift databases.</li><li>• Authored about 10 whitepapers about the limitations of the then-AWS technology in the context of the project.</li></ul>	
<b>Cybersecurity Researcher – Intern</b> <i>Spyry Technologies</i>	Dec. 2016 – Jan. 2017 Bengaluru, India
<ul style="list-style-type: none"><li>• Learned and gained real time experience about vulnerability assessment and penetration testing.</li><li>• Conducted a web vulnerability assessment for a client and wrote a report regarding the different issues on the site.</li><li>• Built a sample unsecure website from scratch and implemented incremental cybersecurity measures.</li><li>• Identified and patched different issues on the client site like SQL Injection and XSS.</li></ul>	

## Projects

---

### Fail-Silent Replicated Token Manager with Atomic Semantics

Apr. 2022 – May. 2022

*Go, Client-Server, Remote Procedure Calls*

- Project to simulate a client-server token management system with replication and (1,N) atomic semantics.
- Wrote Go code using gRPC system calls and Protobuf frameworks.
- Implemented the read-once-write-majority algorithm to ensure consistency in replication.
- Emulated fail-silent behaviour at the token level.

### Data Augmentation Comparison Study

Apr. 2022 – May. 2022

*Python, Neural Network, Databases*

- Project to generate new augmented training dataset using GANs to train classification model.
- Construct a multiple-discriminator GAN to generate images and corresponding labels.
- Trained about 30 models by varying input dataset sizes and performing hyperparameter tuning.
- Contrast image classification model performance by varying the training datasets.

### Benchmarking Multiple Image Classification CNNs

Sep. 2021 – Dec. 2021

*Neural Networks, Machine Learning*

- Project to compare performance of VGG16, VGG19, ResNet50, ResNet101.
- Wrote the entire VGG training and testing code.
- Analyzing and selecting best models among VGG and ResNet models for image classification tasks.
- Benchmarking included accuracy metrics and tracking system memory and energy usage.

### Baltimore City Crime Data Dashboard

Sep. 2021 – Dec. 2021

*Data Visualization, Data Analysis*

- Built a data dashboard to track and visualize Baltimore city crime statistics.
- Analyzed over 400k rows of data to build over 15 graphs and charts to provide insights into crime trends.
- Performed data cleaning, feature engineering, data analysis, and built data statistics.
- Wrote code to build Python visualizations using Pandas, Numpy, Matplotlib, and Seaborn.

### Quantifying Negative Sentiments in Music

Jan. 2021 – Jan. 2022

*APIs, Sentiment Analysis, Data Visualization, Data Analysis*

- Quantification done based on the lyrics and the sonic features of a given track.
- 30000+ tracks information extracted from Spotify, lyrics information scraped from Genius.
- Built multiple features and performed cluster analysis to find similarities between groups of artists.
- Results presented using different Python visualizations.

### Mediclaime Processing

Mar. 2020 – May. 2020

*Machine Learning, Classification Models, Data Visualization, Neural Networks*

- Project aimed at predicting whether a given medical insurance claim will be accepted or not.
- Performed data cleaning and feature engineering on a dataset of 150000 rows.
- Built 15 classification and neural network models and compared performance.
- Implemented SMOTE to handle the class imbalance.
- Wrote a 90+ page project report detailing tasks done at various phases of the project.

### Codex - An Online Coding Platform

Jan. 2018 – Jun. 2018

*Web Development, Web Applications*

- Project to create an online code editor specifically for college use.
- Designed the editor to support coding in C, C++, Java, and Python.
- Handled relational database design following the best practices in database design.
- Co-authored a project report that tracked and detailed every step of the project.

## Achievements and Awards

---

- Currently in the top two percent of all users and top four percent of Indians on Project Euler.
- Tied 3rd place at the South Zone round of QuantumCode, Techfest, IIT-Bombay, 2016.
- 3rd Place at the national level round of Battlecode, Techfest, IIT-Bombay, 2015.
- Finalist of National level of Excel 2013 – Microsoft Office Specialist competition at Delhi, 2015.
- Won multiple coding and public speaking events during undergrad from 2014 through 2018.

## Positions of Responsibility

---

### Team Lead

Jan. 2017 – Jun. 2017

*Engineering Projects in Community Service, Vardhaman College of Engineering*

*Hyderabad, India*

- Led a team of four in a project to develop an online platform for old age homes to sell handmade goods.
- Lead organizer of Community Outreach Proposal Exhibit, an event to showcase project ideas to garner public interest.
- Built and managed the database of projects and public attendance records.
- Handled task allocation to the volunteers and oversaw the event management end-to-end.

### Technical Head

Jun. 2016 – Jun. 2017

*Computer Engineers' Technical Association, Vardhaman College of Engineering*

*Hyderabad, India*

- Unanimously elected the technical head of the association.
- Brainstormed and selected projects for the association to work on.
- Spearheaded a team of five to work on a project to generate unique student IDs and QR codes.
- Organized 10+ inter-departmental events and competitions and oversaw the event management.

## Other Experience

---

### Content Writer, Mathematics

Dec. 2020 – Jul. 2021

*Eklavya*

*Hyderabad, India*

- Built a mathematics course for 9th-11th grade level students.
- Wrote 120 video scripts as a part of the course.
- Researched and implemented storytelling methodologies in teaching mathematics.

### Subject Matter Expert - Computer Science

Jul. 2020 – Oct. 2020

*Dimentics Info Tech*

*Delhi, India*

- Solved questions in programming, computer organization, and networks textbooks.
- Wrote original solutions to over 500 questions.

## Interests

---

### Podcast Editing

- Lead editor on Have I Made It Yet? - A Podcast for Filmmakers.
- Edited 15/18 episodes on season 1.
- Currently editing season 2, which is due to be released soon.

### Writing

- Wrote 100+ essays and poems.
- Published a poem in Verse of Silence, a literary magazine, Spring 2021.

### Quizzing

- Participated in over 200 quizzes over the last five years.
- Wrote 300+ questions and conducted multiple quizzes at different venues, on different platforms.