Name of the student: Nidadavolu Sri Poorna Priyanka

## List out the universities and courses that you intent to apply for (mention sub-areas of interests too).

Course: Masters in Data Science

Country: US

University: The University of California, San Diego (UC San Diego)

Preferred Intake: Fall 2025

1. Describe the reason/motivation to pursue the Master’s program. Please make it clear and explain in detail. (Think, is there any personal story attached to this, any specific instance that you can recall)

Pursuing a Master's degree will offer me valuable networking opportunities with professionals and peers, allow for participation in research projects, and help me acquire advanced skills essential for specialized roles. Additionally, earning a Master's will fulfill my personal ambitions and significantly boost my earning potential. My journey into data science began during a team project for our web development project. We were tasked with enhancing user engagement on our website, and I volunteered to conduct user analysis using the data we had collected. As I sifted through the numbers and patterns, I stumbled upon a surprising trend: certain features were far more popular with specific demographics than we had anticipated. By presenting these insights to my team, we were able to develop a website that was more user-friendly and accessible, ensuring that it could be easily navigated by a wider range of users. This approach allowed us to create a platform that resonated with most people. My interest in data science was further deepened, especially after working on a data-driven project at my job, where I witnessed how data collection and analysis could enhance AI model performance. This experience highlighted the transformative impact of data science on outcomes and decision-making processes. I am eager to explore this field further, believing that a Master's in data science will equip me with the advanced knowledge and skills necessary to thrive. The rapid advancements in areas like machine learning, deep learning, and big data analytics present numerous opportunities across industries. A master's program will enable me to delve into these topics, providing hands-on experience in building predictive models, working with complex datasets, and utilizing cutting-edge tools and techniques. I am confident that this program will enhance my analytical thinking, technical expertise, and problem-solving skills, preparing me for a dynamic career in data science.

## Why do you feel that MS degree is imperative for you? Link your career objectives with it (short-term and long-term goals are to be mentioned). – What do you want to do after the program? (Eg: Machine Learning Developer or Embedded engineer etc)

(If you want, you can refer to Google, be specific while writing career goals. You can mention what kind of company you would like to join, where do you see yourself in this industry 10-15 years down the line?)  
  
Short-term goals: pursue masters in data science get familiar with various technologies that can be useful for data scientist. Develop small project on predictive models which involves data analysis, machine learning, programming and visualization techniques, to get a hands on experience as a data scientist.  
Long-term goals: After 10-15 years, I want to work as a principal data scientist, whose primary work involves managing large complex data and use advanced technologies to get insights from data, in a well reputed product based company.  
After the program, I am planning to start my career as a data scientist and learn foundational data science skills.

## Describe your personality (focusing on leadership and inter-personal skills).

(Don’t just list down the qualities you have, give me examples where you showcased those skills)

**Teamwork and collaboration:** Worked as team for various college projects and well as work. During college collaborated with 3 team members in a project called ECO ENTERPRENEURSHIP in which we, a team of 3 actively collaborated to build a website. I even helped my peers to understand certain topics like java, spring, html, which helped us to contribute equally in the project.

**Time management:** I was able to prioritize my work when I was doing internship. I was able to effectively contribute in both my work and my studies and was able to score good in academics and in work I was able to meet all my deadlines which helped me to get a full time offer in the same company.

**Adaptability and flexibility:** I can adapt to different environment in professional world, and was able to learn new skills that were required for my daily work. I am always open to feedback from my colleagues, which helped me to improve the quality of my work.

**Leadership:** Lead a project in college and at work. In college lead a team of 3 people and delivered an efficient website as a outcome. In office, co-lead of team of 10 people in a stretch project, was not only able to complete it but also won best project in people’s choice category.

## Describe your family background highlighting any significant point that you feel is worth mentioning.

(Is there anyone in your family who is in the same field? Who inspires you? Is there any story worth mentioning?)

My brother has been my greatest inspiration for entering the field of data science. As a data analyst at a multinational company, he often shares stories about how organizations store, manage, and process vast amounts of user data. He also explained the challenges involved in maintaining data and transforming it into meaningful insights. As someone who enjoys solving complex problems, I found this incredibly fascinating. His experiences sparked my interest in the field, motivating me to pursue data science with the hope of developing innovative ideas that could improve data analysis and management.

## Extensive description of your educational journey so far, right from school to the last acquired degree. It is important that you highlight your accomplishments well.

(Pick 1 or 2 major projects or accomplishments during your education and explain howyou excelled at those tasks) Detailed description about internships and projects are required as to what were the challenges and learning from them?

School: 10th: Dr. KKR Gowtham International school, 11th-12th : Narayana Junior College

Academics: CGPA: 10th – 10/10 12th – 9.75/10 (MPC)

Extra-curricular: participated in badminton challenge also enacted in various skits in school.

**Graduation**: B.Tech in CSE, K L University (GPA-9.29)

**Why did you choose this stream for graduation?** Because of its diverse skill set ranging from programming, algorithms, networking and problem solving. And it a continuous learning path, encourages lifelong learning due to the rapidly changing nature of technology.

**Your favorite subjects during graduation:** python programming, database management systems, data visualization techniques.

(Note: Please describe in detail about the things that you’ve done and learnt while doing projects and internship. Don’t mention just the titles but describe it in detail)

(note: What projects did you take up in college (BTech/Academic projects)? Please give detailed information. How did you perform in these projects? Did you work on a project beyond the prescribed curriculum? If yes, give details. (Project name, explanation, date or year of completion).)

**Projects:**

TAKE A TRIP: "Take a Trip" is a travel, tourism, and hospitality project designed to help travelers explore major cities in India with ease. It provides curated suggestions on key destinations and attractions across the country, along with direct access to trusted travel agents who assist in trip planning. Additionally, the platform offers booking services for hotels and rental cars, ensuring a seamless and hassle-free travel experience for users.  
Technologies used – Django, python, mysql database, HTML and CSS  
Date completed – May 19, 2021  
Achievements: Recognized as one of the best project in our project.  
  
Customer Response Analysis in Direct Marketing Campaigns: This project analyzes direct marketing campaign data from a Portuguese banking institution, focusing on phone call campaigns aimed at promoting term deposits. The objective was to visualize and interpret the dataset to uncover trends in customer responses. Utilizing Tableau and Python, the analysis provided graphical representations that highlighted relationships between client demographics and their likelihood to subscribe to financial products. Discovered key customer behavior patterns, leading to a 12% improvement in marketing strategies. The project specifies the data visualization techniques employed, the insights gained from the analysis, and recommendations for optimizing future marketing efforts.   
Technologies used – Python, Tableau  
Date Completed – 29th Nov, 2021

**Internships:**

INTERNSHIP AT IBM: Developed a django repo using python and javascript and integrated it to Spring boot, Java and Postgres.  
Technologies used: Spring boot, Postgres, Django, JavaScript, Python, Java  
Date completed – Jan 2023 to June 2023

INTERNSHIP AT SAMSUNG PRISM: This internship aims to create a dataset of contact names from various languages, along with their phonetic representations. By defining phonemes as the smallest units of sound that distinguish words, the dataset will illustrate phonetic similarities despite different spellings. This project contributes to speech recognition and phonetic matching by providing a valuable dataset and exploring effective phoneme generation and validation techniques. Utilized Python for data processing and phoneme generation, improving speech recognition accuracy by 10%  
Technologies Used – Python, Speech Recognition  
Date completed – Jun 2021 to Mar 2022

VIRTUAL INTERNSHIP AT AICTE: During my internship, I completed a foundational cloud computing course that provided an in-depth understanding of AWS services and their practical applications. I applied this knowledge to a project focused on static web hosting using Amazon EC2. The project involved setting up and configuring a Linux-based EC2 instance with Apache HTTP Server (httpd) on port 80 to host the KL University website. I managed server settings, security groups, and optimized the instance for efficient static content delivery. This experience enhanced my skills in cloud infrastructure, server management, and web hosting on AWS.   
Technologies Used - AWS  
Date completed – Oct 2021 to Dec 2021

**Accomplishments:**

Won Codehers Coding Challenge (Top 30 India) in 2022

**Extra-curricular:** Organized activities to raise awareness on the harmful effects of smoking and drug abuse, engaging students through interactive sessions that highlighted the health risks and encouraged healthier lifestyle choices. Additionally, conducted COVID-19 awareness programs in schools, educating students about the virus, its transmission, preventive measures like mask-wearing and social distancing, and the importance of vaccination, ensuring they were well-informed to protect themselves and their communities.

Gap Year – NO GAP

Are you switching your field? If yes, what’s the reason behind your switching?   
(INCLUDE IF APT)  
Shifting from computer science field to data science field  
Because Data science is one of the fastest-growing fields with increasing demand across industries. Companies are prioritizing data-driven decisions, making data scientists highly sought after. Data science allows you to create measurable impacts in businesses by optimizing processes, predicting trends, and solving complex problems through data insights. The field of data science is dynamic, with new techniques, tools, and methodologies emerging regularly. Also, Data science skills are transferrable across many roles, such as data engineering, machine learning engineering, analytics consulting, and more. And a background in computer science gives a strong foundation for transitioning into data science, as I already have proficiency in programming (e.g., Python, R) and knowledge of algorithms and system design, which are crucial in data science as well.

## Illustrate your performance at work so far. Again, highlight your accomplishments and outstanding performance (rewards and recognitions) and how have you linked your job with your career objectives (both short term and long term). Cite suitable examples.

## Think - What’s the challenge? How have you solved it? What have you learned out of it and have you received any rewards for that work?

(If you are a fresher or have no full-time work experience, you can ignore this.)  
  
Working in IBM since Jun 2023 as a software developer.

* **Received Star of the month award in Nov,2023 from IBM for my contributions in the work after joining as a full time employee.**
* **Received People’s Choice Award for a project in IBM for a stretch project based on multi cloud provisioner using LLMs, python and IBM cloud, reducing cloud resource management costs by 40%.**
* **I worked on a comprehensive rework of the validation framework, which significantly enhanced its efficiency by reducing validation time by nearly 90%. This improvement not only streamlined the validation process but also contributed to overall productivity.**

During my work, I had the opportunity to present multiple findings and insights to stakeholders, focusing on the validation work I conducted. The positive feedback I received was not only gratifying but also validated my approach to communicating complex technical concepts in an accessible manner. Additionally, I spearheaded API integration initiatives, introducing new features that significantly enhanced the functionality of existing code. I also participated in the improvement of IBM WatsonX AI through prompt generation, which allowed me to further explore the intersection of AI and data science. This experience has honed my ability to think critically and innovate within my projects, ultimately preparing me for the dynamic challenges that lie ahead in the field of data science.

Working on the stretch project opened my eyes to the pivotal role data science plays in driving business success. It not only inspired me to pursue a career in this field but also reinforced my belief in the transformative power of data. As a software developer, I recognize that my background equips me with a unique set of skills that will significantly contribute to my short-term and long-term aspirations as a data scientist.

In the short term, my robust programming skills and problem-solving abilities, coupled with my experience using tools like Git and various integrated development environments (IDEs), will enable me to efficiently work with complex datasets, build predictive models, and automate processes. My familiarity with data manipulation and analysis tools will allow me to derive actionable insights that can inform decision-making and enhance operational efficiency.

Looking ahead, my comprehensive understanding of system architecture, scalability, and software deployment will empower me to design and implement end-to-end solutions in data science. I envision integrating machine learning models into production environments seamlessly, ensuring they are both efficient and scalable. Collaborating effectively with engineering teams will be crucial in this journey, as it will facilitate the development of solutions that not only meet business requirements but also adapt to evolving technological landscapes.

CHALLENGE: I believe the biggest challenge I faced was time management. At one point, I was handling multiple high-priority tasks with very limited time to complete them. To address this, I created a detailed schedule and adhered to it consistently, which greatly improved my time management skills. I also made sure to gather regular feedback, which helped me maintain the quality of my work without compromise. Additionally, this experience enhanced my teamwork abilities, as I frequently collaborated with peers and seniors to get feedback and seek advice on how to improve my approach.

1. Highlight the efforts that you have made to achieve your career objectives (online courses, internships, part-time jobs, or certifications).

**CERTIFICATES BY IBM:**

# Data Science Methodologies: This badge earner understands the essential steps used in data science business and research problem solving. This includes problem definition, collecting and analyzing data, building relevant models and understanding model deployment results.

# Data Science Foundations - Level 1: This badge earner has an understanding of the possibilities and opportunities that data science, analytics and big data bring to new applications in any industry. Data Science Foundations - Level 2 (V2): This badge earner has a solid understanding of data science methodologies, and tools. The individual also has a hands-on appreciation of programming languages to use in data science tasks. IBM watsonx Essentials: This badge earner understands and can articulate the AI use cases where the IBM watsonx platform helps clients deploy and embed generative AI across their businesses, manage all data sources, and accelerate responsible AI workflows. In addition, the earner understands the concepts and advantages of AI, along with IBM's AI strategy for addressing ethical and sustainable AI challenges.

**COURSES FROM LINKEDIN:**

# Become a Django Developer: Django is a popular Python web framework designed to help developers rapidly build secure, scalable web applications. In this course I got the skills to build web applications with Django, work with data and forms, and deploy your Django applications in this fast-paced learning path.

# Advance Your Python Skills for Data Science: In this course I learned the general programming principles and methods for Python, and then begin applying that knowledge to using Python in data science-related development.

**COURSES FROM COURSERA:**  
  
Big Data Modeling by University of California San Diego and offered through Coursera: This course includes Big Data Modeling and Management Systems Introduction to Big Data, Big Data Integration and Processing, Graph Analytics for Big Data, Machine Learning With Big Data, Big Data - Capstone Project  
[Data Visualization](https://www.coursera.org/learn/datavisualization?specialization=data-mining) by University of Illinois Urbana-Champaign: **In this course will I learned** how to make more effective visualizations of data**,** learn**ed** new ways to display data, applying some fundamental principles of design and human cognition to choose the most effective way to display different kinds of data. **Also learned** how to use popular applications like Tableau to connect to data warehouses to extract and visualize relevant data, **and** how Tableau works so you can use the same techniques to make effective data visualizations on your own with any visualization system.

### [Text Retrieval and Search Engines](https://www.coursera.org/learn/text-retrieval?specialization=data-mining) by University of Illinois Urbana-Champaign: This course helped me with search engine technologies, which play an important role in any data mining applications involving text data for two reasons. I learned the basic concepts, principles, and the major techniques in text retrieval, which is the underlying science of search engines.

### [Text Mining and Analytics](https://www.coursera.org/learn/text-mining?specialization=data-mining) by University of Illinois Urbana-Champaign: In this course I learned the major techniques for mining and analyzing text data to discover interesting patterns, extract useful knowledge, and support decision making, with an emphasis on statistical approaches that can be generally applied to arbitrary text data in any natural language with no or minimum human effort.

## Database systems by Universidad Nacional Autónoma de México: This specialized program is aimed at computer people who want to enter the field of information systems and learn their different types of requirements, architectures, performance, techniques and tools so you can know when to use business intelligence, data mining, data science, databases , databases in memory or big data in order to have reliable, maintainable and scalable data intensive systems. Through 4 courses, you will cover [transactional relational databases, business intelligence and Data warehousing, NoSQL technologies, and reliable, scalable and maintainable data intensive applications that will prepare you for a specialized information system consultant or data scientist. Fundamentals of Visualization with Tableau by [University of California, Davis](https://www.coursera.org/learn/data-visualization-tableau): Learned about Install Tableau Public Software and create a visualization, Examine and navigate the Tableau Public workspace, Practice and connect to different data sources

# Video Blog On Data Science In Healthcare Industry in LinkedIN: The video blog on Data Science in the Healthcare Industry explores the data science life cycle, from data collection and preprocessing to model building, evaluation, and deployment, all within the context of healthcare. It emphasizes the key components of data science in the industry, such as data management, machine learning, and predictive analytics. The video underscores the growing need for data science to improve patient outcomes, personalize treatments, and optimize healthcare operations. It also highlights practical applications, including early disease detection, drug discovery, medical imaging analysis, and enhancing hospital efficiency.

## Describe the co-curricular activities, hobbies and social interests (community services) that you regularly pursue and how they have helped you in shaping your personality.

## Participating in various NGO activities, such as tree plantation, painting schools, and providing solar lamps to underprivileged children, has significantly shaped my personality. These experiences taught me the importance of environmental sustainability, community involvement, and the power of small contributions to improve the lives of others. They also helped me develop empathy, teamwork, and a strong sense of social responsibility, motivating me to continue making a positive impact in my community.

What are your reasons for applying to this particular university? Specify what made you choose this univ. Specify its course, professors, publications, infrastructure, facilities that inspired you to choose this univ.

The University of California, San Diego (UC San Diego) boasts world-class infrastructure and research facilities. Key features include the San Diego Supercomputer Center, which supports advanced data science research, and the Qualcomm Institute, fostering innovation in data analytics, AI, and machine learning. UCSD is also home to a state-of-the-art Jacobs School of Engineering and a wide range of labs, including those dedicated to robotics, computational neuroscience, and bioinformatics, offering students access to cutting-edge tools and collaborative research environments in data science and beyond.

**Bradley Voytek**’s research integrates data science techniques with computational neuroscience, particularly focusing on large-scale brain data analysis using machine learning models. This aligns directly with my skills in data science, including my experience in predictive modeling, Python programming, and data visualization techniques. My work on AI model training and data-driven insights would complement his research, particularly in areas like neural oscillation data analysis, pattern recognition in brain activity, and applying machine learning to uncover meaningful trends from complex datasets.   
**Rose Yu**’s research on scalable machine learning models for spatiotemporal data aligns well with my interests in predictive modeling, AI, and real-world applications. Her focus on time-series analysis, dynamic systems, and AI-driven decision-making complements my goal of building advanced models for real-world problems like healthcare and transportation. With my background in data collection, AI model training, and working on complex data sets, her work would help you develop cutting-edge skills in analyzing massive datasets and applying machine learning techniques to solve critical challenges.

1. What is your expectation on the SOP? How do you want us to write it? Is there any word limit? Do you want us to highlight any situation or project or achievement? Please mention.

Please highlight data science related projects and experiences  
No word limit, approx 1.5-2 pages

https://grad.ucsd.edu/admissions/requirements/statement-of-purpose.html

*Thank you!!*