

Nikshep A Kulli



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Profile

I am a Ph.D. candidate in Computer Science, specializing in data science and machine learning. As a Research Assistant at Sacred Heart University, I've dedicated myself to advancing the field, contributing to a 50% reduction in laboratory accidents. My academic focus includes using Python, R, and SQL for projects like breast cancer prediction, sentiment analysis, and COVID-19 tweet modeling, achieving consistently high accuracy.

In a Data Science Virtual Intern role at British Airways, I refined skills in web scraping and predictive modeling, employing tools such as BeautifulSoup, Scikit-learn, and Random Forest. With over four years as a Software Engineer at Cerner Corporation, I enhanced AI and ML-based life-saving technology, improved data collection frameworks, and streamlined workflows. Proficient in Java, C, C++, C#, JS, and big data technologies, I integrated Agile and semantic versioning methodologies.

Driven by a passion for applying data science and machine learning to solve real-world challenges and drive business growth, I am ready to make meaningful contributions to the academic community and push the boundaries of knowledge in computer science during my Ph.D. journey.

Work experience

01/2023 – PRESENT

CONNECTICUT, UNITED STATES

Research Assistant Sacred Heart University

Trained and supported students on equipment usage and safety protocols as a Graduate Assistant, resulting in a 50% decrease in accidents and incidents in the laboratory.

- Achieved 95% accuracy in breast cancer prediction using linear regression on the Scikit dataset.
- Conducted sentiment analysis on tweets with an 85% accuracy rate.
- Identified prevalent topics and sentiments in COVID-19 tweets using LDA analysis.
- Designed Vinyl Rack for the IDEA Lab, resulting

Work experience

in a 30% increase in storage capacity and an award for outstanding creativity and innovation.

- Accomplishments showcase the ability to deliver impactful results, utilizing data-driven approaches that improve business outcomes.
- Possesses strong analytical skills and the ability to work with large datasets, making for a valuable asset in any research or data-driven project.

05/2023 – 05/2023 UNITED STATES

Data Science Virtual Intern British Airways

- Web Scraping for Company Insights: As a part of my role, I developed web scraping techniques using tools such as BeautifulSoup to extract valuable data from various websites. By leveraging Python libraries like Seaborn, NumPy, and Pandas, I performed data analysis and visualization to uncover insightful patterns and trends. This process enabled me to gain valuable insights into competitor strategies, market dynamics, and customer behavior, which facilitated data-driven decision-making for the organization.
- Predicting Customer Buying Behavior: In this project, I utilized my expertise in machine learning, specifically using Scikit-learn and Random Forest algorithms, to build a predictive model for customer buying behavior. By analyzing historical customer data and incorporating relevant features, I developed a robust model capable of accurately predicting customer preferences and purchase patterns. This valuable insight empowered the company to tailor marketing strategies, enhance customer segmentation, and optimize business operations to drive sales growth and customer satisfaction.

12/2019 – 08/2022

BENGALURU, KARNATAKA, INDIA


Software Engineer II Cerner Corporation

- Worked on AI and ML-based life-saving leaf blower technology for Cerner.
- Wrote Call Home scripts using SQL, PL-SQL, T-SQL, VB Script, Power Shell, and database queries. Results stored in the Cloud Transport Service CCTS and displayed in Vertica & Lon databases.
- Improved Jetstream framework CSV reader and

Work experience

Call Home data collection framework.

- Created a Java Native Interface to fetch free disk space on Linux servers using JavaScript & C++.
- Enhanced server identification scripts and crash gather dumps data collection.
- Eliminated sensitive password display in the Millennium domain for the Olympus application using JavaScript.
- Streamlined Workflow Analyzer workflows using the new CorrelationID parameter and optimized timers.
- Designed a UI portal for CallHome utilizing the Django framework and Python.
- Wrote a JavaScript to create new datastores in the Olympus UI.

 08/2019 – 11/2019  BENGALURU, INDIA

Software Engineer **6D Technologies**

- Developed SMSC GUI for clients in Vietnam and Indonesia and served as React UI and Backend Developer for Sony Ericsson's Campaign Manager System (MAGIK), resulting in a 40% increase in system efficiency and a 25% reduction in system downtime.
- Constructed a React element for a tree structure using JSON and Reactstrap in the Magik UI project.
- Wrote services in SPRINGBOOT for the React tree view with CRUD operations.
- Implemented a feature in SMSC GUI to view MSISDN reports utilizing Java and JSP servlets.


 06/2018 – 07/2019  BENGALURU, INDIA

Embedded Software engineer **Probots Techno Solutions**

- Developed an Android app for kidney dialysis reprocessing machine, resulting in a 15% increase in machine communication efficiency and a 20% reduction in communication errors.
- Created a C# app with REST API for Collin Aerospace evacuation-slide fabric tester, resulting in a 30% reduction in testing time and a 25% increase in testing accuracy.
- Devised a GPS tracking Android application for Alpine star using Google API and an Arduino Mini.
- Formulated a native C/C++ keycode API to interact with a REST API for controlling a kidney dialysis reprocessing unit for GK Healthcare.
- Developed an Android app with an API to connect with a GPS tracker kit for Alpine Star.
- Engineered a remote control that uses Bluetooth and enables recording and clicking of videos on RTMP and RTSP servers.
- Engineered a pet tracker app using Android, Arduino GPS, C/C++, REST API, Google Maps API, and JSON.

Work experience

- Constructed a custom camera app that captures photos and QR codes with auto-focus.
- Implemented live video streaming with RTSP and RTMP servers.

 01/2024 – PRESENT

 FAIRFIELD, UNITED STATES OF AMERICA

Adjunct professor **Sacred Heart University**

As an Adjunct Professor at Sacred Heart University, I played a pivotal role in imparting comprehensive knowledge and expertise in diverse areas related to database management, natural language processing (NLP), and data structures.

MongoDB Instruction: Developed and delivered courses focused on MongoDB, covering a wide spectrum of topics within the realm of this NoSQL database system. Provided students with a deep understanding of MongoDB architecture, implementation, and advanced features.

Text-Based Analysis: Taught advanced techniques in text-based analysis, including Natural Language Processing (NLP), Latent Dirichlet Allocation (LDA) analysis, sentiment analysis, and text summarization. Empowered students with the skills to analyze and extract meaningful insights from textual data.

C++ and Data Structures: Instructed comprehensive courses on C++ programming language and data structures. Ensured students gained proficiency in the fundamentals of C++ and acquired a strong foundation in data structures, fostering their ability to design efficient algorithm.

Data Architecture: Led courses covering the principles and practices of data architecture. Delved into topics such as database design, optimization, and scalability, equipping students with the knowledge required to design robust and scalable data systems.

Through engaging lectures, hands-on projects, and real-world applications, I fostered an interactive learning environment that encouraged critical thinking and problem-solving skills. Additionally, actively contributed to curriculum development and stayed abreast of the latest advancements in relevant fields to continually enhance the quality of education provided.

Education

09/2022 – PRESENT

CSIT - Data Science | Master of Science Sacred Heart University

Sacred Heart University, Fairfield, CT Master of Science – Data Science; GPA: 3.9/4 Aug 2022 – Dec 2023 Relevant Coursework: Machine Learning, Deep Learning, Big Data Analytics, Data Science Architecture, Advanced Database Design, Applied Statistics, Advanced Scripting Python, Special Topics in Data Science, Deep Learning, Data Science Architecture. As a research assistant in data science, I have worked on various research projects involving machine learning and statistical analysis. My expertise lies in data cleaning, data visualization, and model development. I have experience using programming languages such as Python and R, and I am proficient in using data science libraries such as Scikit-learn, TensorFlow, and PyTorch. I have strong communication and collaboration skills, and I work well in a team-oriented environment. Likewise, I am seeking opportunities to contribute to impactful research projects in the field of data science

07/2014 – 09/2018 BENGALURU, INDIA

Electrical & Electronics Engineering | Bachelor of Technology - BTech M. S. RAMAIAH UNIVERSITY OF APPLIED SCIENCES

In my engineering pursuits, I led two impactful projects:

• Hexapod Robot:

Engineered a stable hexapod structure, showcasing robotics, control systems, and mechanical engineering expertise. Implemented advanced control algorithms for coordinated leg motion across terrains.

• Touchscreen Text for Persistence of Vision (POV):

Created an interactive Touchscreen Text display, merging electronics, programming, and aesthetics. Developed a touchscreen interface and precise timing mechanisms for synchronized LED patterns. These projects highlight my ability to tackle complex engineering challenges with theoretical knowledge and hands-on creativity, ready to contribute to cutting-edge EEE projects.

04/2011 – 05/2014 BENGALURU, INDIA

Electrical & Electronics Engineering | Diploma in EEE P. V. P Polytechnic

In my pursuit of an Electrical & Electronics Engineering diploma, I executed two impactful projects:

• Water Level Indicator:

Education

Designed and implemented a system showcasing expertise in electronic circuitry, sensor integration, and microcontroller programming. Achievements include a reliable sensor interface and real-time data interpretation for water level monitoring.

• Persistence of Vision:

Executed a display combining electronics, programming, and mechanics, achieving synchronized LED timing for dynamic visual effects. Notable achievements involve engineering a POV display system for visual illusions and applying precise timing mechanisms.

These projects showcase my practical skills and innovative mindset, deepening technical prowess while instilling a holistic problem-solving approach. Excited to leverage this expertise in EEE for effective contributions to future challenges.

★ Skills

Natural Language Processing (NLP)
PostgreSQL # HTML
Software Configuration Management
Technical Architecture # Data Engineering
Cascading Style Sheets (CSS)
Object-Oriented Programming (OOP)
Testing Practices
Back-End Web Development
Beautiful Soup # Data Analysis
Microsoft Excel # Tableau # Keras
Panda # NumPy # Scikit-Learn
Jupyter # pytest # MySQL # Hadoop
Git # Pandas (Software)
R (Programming Language) # Big Data
Data Modeling # Data Science
Data Visualization # Big Data Analytics
Statistical Modeling # Machine Learning
Text Analytics # Java # JavaScript
Python (Programming Language)
Hibernate # Spring Framework
VBScript # SQL # React.js # C#
C++ # SASS # Core Java # J2EE
Spring # SpringBoot # React
Apache Airflow # Jboss # JQuery
Vertica # MongoDB

Awards & Publications


06/2021

Ship IT IX

Won first place for P@W - pal at work Application for associates to self analyze their mental health

Awards & Publications

and take suggestions based on decisions.

 06/2021


Innobainme

Innovation award selected in top 3 for unique idea which is scalable and patentable. leaf blower for life!

 10/2021

Associate Behavior Award for Innovate & Simplify in CWx

Received for the VS code plugin made for Call Home developers.

 01/2022


Ship IT XI

Won ShipIt second place for INGEST - Interactive Gestures AI based android application for understanding hand gestures in sign language, it helps connecting with challenged people and understand them.

Future of Information and Communications Conference

Published research article COVID-19 Vaccine Response on Social Media using LDA Analysis

Certificates

 05/2023

Data Science Virtual Experience Programme British Airways

Over the period of May 2023, Nikshep Kulli has completed practical tasks in:

Web scraping to gain company insights
Predicting customer buying behaviour