

# Krishna Murthy Surya Narayanan

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## WORK EXPERIENCE

- NamSys Inc.**, Toronto, Canada | *Software Developer* **Oct 2021 - Present**
- Developed on-prem and web systems for working with **Cash flow management** in bank and armored carriers.
  - Enhanced project design to automate data population to reduce errors while improving product efficiency by **35%**.
  - Developed protocols and API integration with Ranger Silver Bullet to standardize the check scanning process reducing the overall subscription overhead cost by **75%**.
  - Migrated the enterprise application from **Java 8 to Java 21**, updating dependencies, refactoring code, and ensuring compatibility with frameworks like Spring Boot and Log4j.
- SaskTel**, Regina, Canada | *Web Developer-Co-op* **May 2021 - Sep 2021**
- Built highly scalable Sentiment Analysis model to understand the review sentiment of customers for different products using **word-to-vector** training model with TF-IDF tweaking to improve accuracy to 85%.
  - Created a data stream using Kafka and ingested the data into a **time series database** (InfluxDB).
- Accenture**, Hyderabad, India | *Associate Software Engineer* **Mar 2018- Sep 2019**
- Worked extensively with **TDD** to maintain code quality and gained hands-on **DevOps** experience, in building and deploying applications to production using Jenkins and Git.
  - Built applications and features for products majorly based on Java, **spring MVC**, JavaScript, and JSP.
  - Developed a dashboard to map summary indices for timely metrics monitoring using **DB2 and Grafana**.
- National Institute of Technology**, Karnataka, India | *Research Assistant-Internship* **Apr 2017 – July 2017**
- Developed a Music Mood Estimated model using Feature Extraction in Matlab. The model predicts the mood of the song played using **Random Forest** and **Naïve Bayes** classifiers.
  - Performed correlation analysis to reduce the feature set that supplements a recommendation system.
- Defence Research and Development Org.**, Hyderabad, India | *Test Engineer-Internship* **Oct 2016 – Dec 2016**
- Developed **REST APIs** and actively debugged the Navigation and Propulsion systems using **Postman** to identify issues in the service layer for efficient performance.
  - Trajectory control and **dynamic reprogramming** were focused on producing good functional outcomes.

## TECHNICAL SKILLS

<b>Languages:</b>	Java, JavaScript, Python, React, Node, Angular, HTML, CSS, C, and C++.
<b>Python Libraries:</b>	NumPy, Pandas, OpenCV, PyTorch, and Matplotlib.
<b>Machine Learning:</b>	Regression, Classification, Clustering, and Natural Language Processing (FastText, BERT)
<b>Development Tools:</b>	Git, Jupyter Notebook, VS Code, Eclipse, Matlab, MS Visio, Weka, Nintex, and SharePoint.
<b>Cloud/Databases:</b>	AWS, Docker, Kafka, Azure, MySQL, PostgreSQL, MongoDB, and InfluxDB.

## EDUCATION

- University of Regina**, Regina, SK **May 2021**  
*Master of Science in Computer Science* | **Cumulative GPA: 3.90/4.0**
- GITAM University**, Visakhapatnam, India **June 2018**  
*Bachelor of Science in Computer Science* | **Cumulative GPA: 8.6/10.0**

## PROJECTS

- Tokyo Olympics medal prediction** | *Python, Pandas, Numpy, scikit-learn, Random Forest* **Apr 2021 – July 2021**
- Developed a **Random Forest** regression model for categorical data analysis to predict the number of medals an individual with a given set of attributes can win at the ongoing Tokyo Olympics 2020.
  - Enhanced the model using **Simple Imputer**, **Label Encoder**, and mathematical operations supported by Numpy.
- Personalized eye-wear shopping** | *Django, Python, SQL, OpenCV, NumPy, Image Processing* **Jan 2021 – Mar 2021**
- Developed an efficient eye-wear recommendation system for online shoppers based on their facial shape.
  - Programmed **OpenCV** for face detection and dlib for face landmark detections.
- UAV based data communication using WSN** | *Regression, Python, SQL, NumPy* **May 2020 – Aug 2020**
- Developed a robust UAV flight path suggestion model for efficient data transfer from **Sensor** and **Relay** Nodes.
  - Discovered that a UAV moving at a constant velocity with changing altitude results in faster and accurate data transfer than a hovering UAV.
  - Devised a **regression-based** algorithm to predict the best flying path for a UAV (PSO was performed).

## ACHIEVEMENTS & PUBLICATION

- Published a paper** titled “UAV-based data communication using Wireless Sensor Networks” at ICISS 2021.
- Earned **AWS Certified Developer – Associate** certification, October 2024.