Arun Selvin Kumar Vijayakumar

929 Wilmington Ave • Dayton, OH 45420 • vijayakumara2@udayton.edu • linkedin.com/in/arunselvin

# EDUCATION

**University of Dayton Dayton, Ohio, USA**

*M.S. in Computer Science Expected May 2025*

**GPA: 4**

Relevant Coursework: Software Engineering, Web Development, Algorithm Design, Advanced Programming and Data Structures, Object-Oriented Programming, Database Management Systems.

**SKILLS:**

Programming Languages:Python,BOTO3, Java, C, C++, JavaScript, HTML/CSS, PHP.

Databases/ Streaming Platforms:AWS Services, SQL Server, Oracle, MYSQL, SQLite, Kafka, MQ, Docker.

Cloud Platforms: AWS, Azure.

# WORK EXPERIENCE

**Tata Consultancy Services Chennai, India**

*Software Developer June 2021- August 2023*

* Engineered a robust **Data Migration System** leveraging the power of SQL Server, Oracle, Kafka and Java. This system was instrumental in facilitating seamless data transfer for a global enterprise, ensuring data integrity and minimizing downtime.
* Successfully migrated Oracle SQL code to T-SQL code for seamless integration with SQL Server.
* Implemented real-time data capture and triggers to ensure efficient data synchronization.
* Facilitated migration of data flow from Oracle to IBM Integration, later transitioning to Striim Cloud for enhanced real-time data capture capabilities.
* Developed event triggers in Striim to capture data changes made in RDS (Relational Database Service).
* Engineered SQL code to generate JSON format for RDS data and publish it to Kafka for further processing.
* Conducted code refactoring to optimize query performance and minimize execution time, resulting in enhanced system efficiency.
* Acted as a mentor for junior developers, fostering a culture of knowledge sharing and continuous learning within the team.

**ACADEMIC PROJECTS**

**Web application – Produce Procurement Sales System (Django) Dayton, Ohio, USA**

*University of Dayton Dec 2023–current*

* Utilized Python and Django to build a robust and user-friendly ecommerce website, enhancing the online shopping experience for users. The website was containerized using Docker for easy deployment and scalability.
* Implemented SQLite for efficient management of product inventory, user data, and transaction records, ensuring data integrity and security.

**An Integrated Automated Contactless System for The Prevention of Infectious Diseases Chennai, India**

*Sri Sivasubramaniya Nadar College of Engineering Jan 2021-May 2021*

* Constructed a prototype that measures all the COVID-19 variables without contact and prevents the entry of people suspected to be the potential carriers of the COVID-19 virus.
* Leveraged the power of Artificial Intelligence by implementing the MobileNetV2 architecture. This advanced AI model was trained to learn crucial non-linear features, enhancing the performance of our mask detection system and achieving an accuracy of 98%
* Integrated the temperature, mask detection system, and sanitizer dispenser for overall prevention.
* Filed **patent application** in March 2023; has been published by the Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM).

**Automation Of Energy Conservation (Arduino UNO -MySQL-mobile app) Chennai, India**

*Sri Sivasubramaniya Nadar College of Engineering July 2020-Dec 2020*

* Constructed a prototype of an automation system with Bluetooth remotely controlled by a mobile app for organizations.
* Monitored the usage of appliances using sensors, then recorded and transmitted that data to a database for analyzing the energy saved.

**ADDITIONAL EXPERIENCE**

**University of Dayton Dayton, Ohio, USA**

*Student Grader Jan 2024 – Current*

* Graded assignments for CPS 501 Advanced Programming and Data Structures, ensuring fair and timely evaluation of student work.
* Collaborated with course instructor to discuss assignments, grading policies and specific student concerns.
* Maintained confidentiality and integrity while handling sensitive student information.