

Jaswanth Kattubavi

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Profile

Results-driven Software Engineer with **1.8** years of hands-on experience in **Python** development and **AWS** cloud services. Currently pursuing an **MSc in Data Science and Artificial Intelligence** at the University of Liverpool. Skilled in **backend development**, **cloud deployment**, and debugging complex systems. Passionate about applying machine learning and AI techniques to deliver data-driven solutions. Eager to contribute to innovative consulting and system integration projects in fast-paced environments.

Education

University Of Liverpool | Sept 2023 – Dec 2024 | Liverpool, UK

MSc Data Science and Artificial Intelligence, **Merit**

Key Modules: Programming Fundamentals, Applied AI, Data Mining & Visualization, Web Development.

Sri Venkateswara University | Jun 2018 – Sept 2021 | Tirupati, India

Bachelor of Science (Triple Major: Mathematics, Computer Science and Physics), **Distinction**

Skills

- **Programming Languages:** Python, C#, .Net, SQL
- **Cloud/DevOps:** AWS (Lambda, S3, RDS, EC2, CloudFormation, CloudWatch), Docker, CI/CD, Jenkins
- **Web Development:** RESTful APIs, Django, Django Rest Framework, FastAPI, Flask, HTML, CSS, JavaScript
- **Machine Learning:** TensorFlow, Keras, Scikit-learn
- **Databases:** PostgreSQL, MySQL, SQLite (Relational Databases)
- **Operating Systems:** Linux, Windows, MacOS
- **Version Control:** Git, GitHub
- **Tools:** Postman (API Testing), Swagger, JIRA, Pytest, Notion, Excel, PowerPoint

Work Experience

Growz Software Solutions – Software Engineer | Nov 2021 – Aug 2023 | Bengaluru, India

- **Developed RESTful APIs** using Python and Django REST Framework based on technical design specifications, improving efficiency backend by **30%** and supporting seamless integration across web and mobile platforms.
- **Designed and optimised PostgreSQL database schemas**, reducing query response times by **25%** and improving data reliability under high loads.
- **Integrated third-party services** including Cronofy, Paytm, AWS Cognito, S3, and CloudWatch, increasing operational efficiency.
- Collaborated with cross-functional Agile teams to support project delivery, client-facing activities, and iterative development cycle across diverse systems.
- Practiced **Test-Driven Development (TDD)** using Pytest, achieving **>90% test coverage**, documented endpoints via Swagger for internal and external teams.
- Deployed Docker containers on **AWS EC2** instances, maintained source control using Git, and tracked sprint progress in **JIRA**.

Skills Used: **Python, Django REST Framework (DRF), PostgreSQL, Pytest, Docker, Swagger, Postman, JIRA, Git, AWS (Cognito, S3, EC2, CloudWatch), API Integration.**

Key Projects

Building a National Lottery Profit/Loss Simulator – Dissertation

- Developed a web-based lottery simulation using **Python, Flask**, and **SQLite**, supporting **5** game formats across **100+** countries.
- Architected a dynamic individual currency system, facilitating simulations in local currencies for global adaptability, enhancing user engagement by **85%**.
- Built interactive data visualizations with **Plotly** to monitor **spendings, winnings**, and **profit/loss** trends.
- Integrated a secure user authentication and session management, reducing unauthorized access by **95%**.
- Enhanced system performance to manage up to **50,000** draws efficiently with real-time updates.

Technologies Used: **Python, Flask, SQLAlchemy, SQLite, HTML, CSS, JavaScript, Bootstrap, Plotly Express.**

Web Development

- Developed two full stack web applications: a project management system in **PHP** and a **RESTful API** for managing player data, enhancing user interaction and data management efficiency.
- Designed and implemented a robust backend system with **MySQL**, ensuring secure data handling, and integrated user authentication, resulting in **30%** reduction in data retrieval time.
- Employed **RESTful** principles in **API** development, achieving a response time improvement of **25%** for client server communication and supporting data updates with real-time error handling.

Technologies Used: **PHP, MySQL, HTML, CSS, JavaScript, RESTful API, Postman.**

Advanced ML for EMNIST Classification

- Implemented and compared **MLP** and **CNN** models for handwritten character recognition using the **EMNIST** dataset, achieving an accuracy of **88.81%** with the CNN model.
- Applied advanced optimisation techniques, including **hyperparameter tuning**, regularisation, and dropout, improving model generalisation by **12%** and reducing overfitting.
- Conducted extensive model evaluation with precision, recall, F1 scores, with the CNN outperforming MLP by **1.75%** in overall accuracy.

Technologies Used: **Python, TensorFlow, NumPy, Pandas, scikit-learn, Matplotlib, Seaborn.**

Computer Vision and Image Classification

- Introduced a fruit classification using **CNN**, with an accuracy of **93%** by leveraging transfer learning with pre trained models (VGG16, ResNet50).
- Improved model generalisation through data preprocessing techniques, including scaling, normalisation, and augmentation, increasing model robustness by **15%** across diverse fruit images.
- Performed hyperparameter tuning and model optimisation, reducing loss by **30%** and demonstrating higher performance with **ResNet 50** compared with **VGG16**.

Technologies Used: **Python, TensorFlow, Keras, NumPy, Pandas, OpenCV, Matplotlib, scikit-learn, VGG16, ResNet50.**

Certifications & Learning

- AWS Cloud Practitioner (in progress)
- Hacker Rank Python 5 Star Gold
- Currently exploring .NET and C# via online labs

Additional

- Right to work in the UK under the Graduate Route (Post Study Work visa) – eligible to apply any time before August 2025.
- Recently graduated (July 2025) with MSc in Data Science and AI from the University of Liverpool.
- Open to relocation, travel, and working across multiple UK office locations and client projects.