

# SHUBHAM PATIL

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## EDUCATION

### Master of Science, Computer Science

GPA - 3.6/4.0

Westcliff University, San Francisco, CA

Expected Dec 2025

*Relevant Coursework: Machine Learning, Software Engineering, Data Science, Information Security*

### Bachelors of Technology, Computer Engineering

GPA - 3.8/4.0

Savitribai Phule Pune University, MH, India

May 2020

*Relevant Coursework: Data Engineering, Web Development, Artificial Intelligence, Cloud Computing*

## WORK EXPERIENCE

### Software Engineer

June 2020 – May 2023

Searce Inc.

Pune, Maharashtra

- Built RedBead Academy, an LMS for AirAsia using React.js, Bootstrap, Node.js (Express), MySQL, GCP, and Firebase; boosted course completions by 30% and engagement by 25% via gamified, video-based learning.
- Designed responsive UIs for Dainik Bhaskar (media company) and ICICI Lombard (insurance firm) using HTML, CSS, JS, Bootstrap, and jQuery, cutting bounce rates by 20% and boosting retention by 15%.
- Engineered a low-latency live streaming prototypes and solution for BYJU'S on their proprietary platform using Red5 Pro (WebRTC) and Next.js, reducing latency by 40% and doubling viewership capacity.
- Architected GCP storage solutions for Aeye with a tool to capture, store, and label autonomous vehicle videos; built an ETL pipeline using Cloud Functions, TensorFlow, and BigQuery for automation.
- Orchestrated a document search engine for Tata Steel using Django, Angular, Cloud Search API, and Vertex AI. Integrated analytics dashboards with App Script, Data Studio, improving data retrieval by 50%.
- Streamlined CI/CD pipelines for ONDC using Python, Cloud Functions, and BigQuery, transforming transactional data into real-time dashboards with Chart.js and D3.js for digital commerce analytics.

## PROJECT EXPERIENCE

### SecureDNP3 - [Project Link](#)

Feb 2025

- Created robust ML-based IDS for DNP3 protocol using SVM, XGBoost, and GNNs across 9 attack types.
- Applied detailed EDA, normalization, feature selection, and class balancing to refine model inputs.
- Reduced false positives by 37% using hybrid MLP-GNN-DBN model and advanced tuning techniques.
- Benchmarked models with ROC-AUC, F1-score; optimized performance via grid search and confusion matrix.

### Career Compass AI - [Project Link](#)

Dec 2024

- Developed an AI-powered career platform using GPT-3.5, LLaMA 3, and a RAG pipeline with ChromaDB.
- Scraped Reddit and Medium using PRAW and Google Search API for real-time industry insights.
- Created career simulations and quizzes; improved personalization by 25% and reduced latency by 20%.
- Designed a full-stack system with React, TypeScript, Flask, and Tailwind CSS for dynamic UX.

### AI-Driven Malware Detection System - [Project Link](#)

Feb 2024

- Built a malware detection system using Random Forest, XGBoost, and MLP on a 155M API import dataset.
- Improved model accuracy to 97% and reduced cyber-attack detection time by 30% through tuning and RFE.
- Applied Grid Search, RFE, and correlation analysis to optimize features and model performance.
- Engineered full pipeline with Python, TensorFlow, Scikit-learn, and automated evaluation scripts.

## RESEARCH EXPERIENCE

- Copyright - Synchronization of Devices using IR Technologies (Copyright Office Government of India) – L73523
- Crowd Monitoring System using Artificial Neural Networks – [Paper Link](#)
- Application to Monitor and Manage People In Crowded Places Using Neural Networks – [Paper Link](#)

## SKILLS

- **Languages:** Python, JavaScript, Java, C++, TypeScript, Shell Scripting, Scala, R, SQL, Go, Bash
- **Development:** Node.js, Express, React.js, Angular, Spark, Bootstrap, WebFlow, Figma, REST, RPC, LangChain, Apache, REST, GraphQL, Django, Flask, Spring Boot, Streamlit
- **Technologies & Tools:** GCP, AWS, Azure, Docker, Kubernetes, Kafka, Hadoop, Git, CUDA, n8n
- **Data:** MySQL, PostgreSQL, MongoDB, DynamoDB, Google BigQuery, Tableau, Power BI, NLP, LLMs, Excel, Pandas, NumPy, PyTorch, Keras, Scikit-learn, Redis, Amazon Redshift, Amazon RDS