Kriish Solanki

Bachelors Of Technology
Computer Science & Engineering
Minor in Financial Technology (Fintech)

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 GitHub Profile
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EDUCATION

- **Manipal Institute of Technology, Karnataka** — B.Tech CSE | 2021-2025

  CGPA: 8.37 (Ranked in the top 5% of my graduating batch)

  Semester-wise GPA: 7.36, 7.18, 8.54, 9.38, 8.76, 8.80, 8.80

WORK EXPERIENCE

- **ThoughtFocus, Bangalore** — *July 2024 - August 2024*

  Software Engineering Intern

  – Worked on the Gen3 Transaction Switch Platform, gaining experience in transaction processing & mPOS solutions.

PROJECTS

- **TTS Distinction in Human Voices** — *Python, TensorFlow, Deep Learning (CRNN)*

  Human Speech Authentication Model

  – Developed a deep learning model to differentiate human speech from text-to-speech (TTS) systems.
  – Utilized Convolutional Recurrent Neural Networks (CRNN) and extracted key features (MFCCs, mel-spectrograms, Chroma).
  – Achieved an F1-score of 0.88 and an Equal Error Rate (EER) of 18.89% through hyperparameter tuning, enhancing secure voice authentication.

- **Loan Loss Prediction Using ARIMA** — *Python, Time Series Forecasting*

  Risk Management & Forecasting Tool

  – Developed a Credit Risk Indicator (CRI) using outstanding loan balances at various DPD stages and roll rates, applying ARIMA modeling for loan loss forecasting.
  – Ensured stationarity via ADF tests and differencing, optimized parameters using ACF/PACF analysis
  – Conducted residual diagnostics, including normality assessment, distribution validation, and autocorrelation analysis.

- **Non-Touch Input Device** — *Python, Opencv, TensorFlow*

  Hand Gesture Control System

  – Engineered a gesture-based interface for hands-free PC control using MediaPipe for hand tracking.
  – Developed a quick-access toolbar with character recognition for seamless navigation and interaction.
  – Implemented a client-server communication model, enabling gesture-based control across multiple devices.

- **PostIT** — *Django, HTML, Bootstrap, jQuery*

  Department E-newsletter Management System

  – Developed a scalable web application to streamline departmental communication and content management.
  – Implemented user authentication, registration, and management, along with RBAC, to ensure secure access, post creation/upload, subscription handling, and automated email notifications.
  – Built a robust Django backend with SQLite3 for secure data storage and seamless integration.

COURSES & CERTIFICATIONS

- **Neural Networks and Deep Learning:** DeepLearning.AI, Coursera

- **Convolutional Neural Networks:** DeepLearning.AI, Coursera

ACTIVE RESEARCH

- **Credit Card Fraud Detection using Homomorphic Encryption:** Leveraged machine learning to detect fraud while preserving privacy with homomorphic encryption.

TECHNICAL SKILLS

- **Languages**: Python, SQL, C

- **Libraries/Frameworks**: Scikit-Learn, Pandas, NumPy, Matplotlib, OpenCV, Django, Hadoop, CUDA, MPI, OpenCL

- **Relevant Coursework**:
  - Database Systems
  - Machine Learning
  - Deep Learning
  - Probability Theory & Statistical Methods
  - Discrete Mathematics & Algebraic Structures
  - Linear Algebra & Differential Equations
  - Multivariate Calculus & Mathematical Analysis
  - Data Structures & Applications
  - Design And Analysis Of Algorithms
  - Distributed Systems
  - Parallel Computer Architecture and Programming