

DEVARSH VANDITKUMAR JOSHI

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Profile

Curious and adaptable Computer Science Co-op student with demonstrated experience across data analytics, software development, and system integration. Strong ability to contribute to multidisciplinary projects, quickly learn new technologies, and deliver accurate, high-quality results. Passionate about clean energy, public infrastructure, and collaborative problem solving.

Education

Ontario Tech University

Sept 2023 – May 2027

BSc (Honours), Computer Science – Co-op

Oshawa, ON

- Relevant Courses: Software Design, Systems Integration, Scientific Data Analysis, Computer Architecture, Linear Algebra, Discrete Math, Statistics, Project-Based Development

Work Experience

Intern – Data Analyst & Developer

Jan 2023 – Jun 2023

ShubhKey Infotech LLP

Remote

- Developed Power BI dashboards and Python data scripts, automating KPIs and reducing reporting time by **35%**.
- Contributed to client ETL workflows using **SQL Server**, MySQL, and Excel VBA to automate operations and flag anomalies.
- Created **Python-based data cleaning and visualization scripts**, reused across multiple projects.
- Supported **5 clients** across finance and business tech verticals, collaborating with developers and analysts.

Projects

Chest X-Ray Diagnosis Model

PyTorch | Computer Vision | NumPy

- Developed a deep learning framework to detect Lung Cancer and classify Pneumonia (Viral vs. Bacterial), achieving **91.03% accuracy** and **98.46% recall** for cancer detection.
- Implemented **Grad-CAM** to generate interpretability heatmaps, verifying that the model correctly localized tumor regions rather than relying on background artifacts.
- Engineered a **Test-Time Augmentation (TTA)** pipeline to improve robustness, reducing false positives from 7% to 4% on the validation set.
- Optimized Pneumonia classification (AUC=0.95) using **Weighted Sampling** to address class imbalance between viral and bacterial cases.

Rott-Ed: AI-Powered Educational Tool

ReactJS | Flask | OpenAI | PostgreSQL | Kotlin

- Built an AI-powered microlearning platform to convert academic PDFs into TikTok-style videos using **AI-generated voiceovers, images, and GPT summaries**.
- Processed **200+ educational documents** with **NLP pipelines**, reducing manual prep time by **60+ hours/month**.
- Achieved **40% improvement** in knowledge recall (based on pilot testing with **20+ students**).
- Implemented spaced-repetition flashcard integration and cross-platform access via **Kotlin** Android app and **Flask** web client.

Drug Trafficking Data Analyzer – EDA Platform

Python | Pandas | Seaborn | NumPy

- Analyzed **10,000+ drug reviews** across conditions, approval status, and feedback sentiment.
- Generated **15+ visual reports** (heatmaps, distributions, comparisons) used for public health awareness campaign design.
- Structured the data wrangling pipeline to achieve **99% accuracy** in condition mapping and data cleansing.
- Packaged the findings into a **Jupyter Notebook** with markdown commentary and visuals for reproducible research.

FlexFit: Fitness App (Cross-Platform)

Python | Kivy | FastAPI | Matplotlib

- Created a multi-functional app tracking user workouts, visualizing progress, and managing profile data for **50+ users**.
- Implemented backend in FastAPI with secure APIs and user-specific logging; used SQLite + Cloudinary.
- Produced graphs for height, weight, BMI trends and personal achievements (**300+ data logs analyzed**).
- Integrated daily streak system with unit tests for reliability (**98% test coverage**).

Technical Skills

- **Languages:** Python, C++, Java, SQL, JavaScript, Bash, LaTeX
- **ML & Science:** PyTorch, TensorFlow, OpenCV, NumPy, SciPy, Scikit-learn, Pandas, Matplotlib
- **Dev & Data Tools:** Git, Docker, FastAPI, PostgreSQL, MySQL, Power BI, Tableau, Excel
- **Concepts:** Deep Learning (CNNs), Computer Vision, Medical Image Analysis, Agile, CI/CD