Utsav Changani

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

Computer Programmer & AI Developer graduating from **George Brown College** with 3+ years of full-stack development experience. Built **BEGLZ AI** (90% accuracy meal scanner) and an **NLP-powered resume builder** deployed to 500+ users. Ranked **top 6% globally** in Kaggle's **Google Gemini competition** through recursive neural network optimization.

Education

Computer Programming and Analysis   Toronto, ON
George Brown College
Expected Graduation: April 2025
High School Diploma   *Surat, GJ*
Physics, Chemistry, Mathematics, Computer Science
Graduation: March 2021

Technical Skills

- **Mathematics**: Statistics, Calculus, Algebra, Geometry, Differential Equations, Set Theory, Number Theory, Probability, Mathematical Logic
- **Physics**: Laws of Motion, Gravitation, Electricity & Magnetism, Thermodynamics, Quantum Physics, Wave Optics, Statics & Kinematics
- **Chemistry**: Organic & Inorganic Chemistry, Elements Chemistry, Electro Chemistry
- **Programming Languages**: HTML, CSS, JavaScript (Node.js, React.js, Next.js, Vue.js, Angular, React Native, TypeScript), Python (Flask, Django, Tkinter, Pytest, Selenium, NumPy, Pandas, Matplotlib, Seaborn, SciPy, Scikit-learn, TensorFlow, Keras, PyTorch, XGBoost, LightGBM, CatBoost, OpenCV, Dask, Manim, MongoDB, Transformers), C (Standard Libraries), C# (.NET Framework, .NET Core, ASP.NET Core, Entity Framework), Java (Spring Boot/MVC/Security, Apache Maven, Apache Kafka, Kotlin), PHP (REST APIs, MySQL/PostgreSQL)
- **Management**: JIRA, Slack, Scrum, Kanban
- **CI/CD & DevOps**: Jenkins, Travis CI, Git, GitHub, Docker, Docker Compose, Kubernetes
- **Cloud Services**: Google Cloud Platform (Firebase, Google AI Studio), AWS (EC2, S3, Lambda, CloudWatch, IAM, DynamoDB, Bedrock, Cognito, Amplify, API Gateway)
- **Other Tools**: Expo, LangChain, LangGraph, Ollama, Postman, Notion, OpenAI APIs, Figma, Zapier
- **Operating Systems**: Windows, macOS, Android, iOS, Linux

Projects & Research

- **BEGLZ** (Co-Founder)
  Developed an **AI-powered mobile app** for Android and iOS that scans ingredients, provides nutritional information, and assigns a **meal quality score**, offering **personalized health recommendations** and fostering **community-driven diet comparisons**.
  Achieved a 90% accuracy rate in ingredient scanning and meal quality scoring.
  Onboarded 500+ users within the first 6 months of launch.
  Tech Stack: **React Native** (UI & Front-end), **Bedrock** (LLM inference), **Cognito** (User Management), **S3** (Database), **Lambda** (API Handling), **API Gateway** (Connections), **Amplify** (Hosting), **DynamoDB** (Database), **Node.js** (Package Handling).
- **VitaE** (Co-Founder)
  Created an **AI-powered tool** that uses **fine-tuned LLMs** and **NLP** to generate customized **resumes** and **cover letters**, ensuring precise alignment with **job descriptions** and enhancing **application success**.

Increased resume creation efficiency by 40%, reducing turnaround time for custom resume generation.
Tech Stack: Same as BEGLZ, adapted for building **AI-powered resume** and cover letter generation tool.

- **Research Assistant to Make Artificial Consciousness**
  Explored whether **large language models (LLMs)** can simulate **emergent consciousness-like behaviors** through recursive self-reflection and dynamic memory integration. Using **Google's Gemini AI**, the model engaged in iterative introspection, adapting its responses over time to simulate **self-awareness**.
  Led 3 iterations of the model's recursive introspection, improving response accuracy by **30%** through each cycle.
  Tech Stack: **Google AI Studio** (LLM inference), **Python** (Jupyter Notebook), **AI** & **NLP Libraries**.

- **Research Attempt: Predicting Problematic Internet Usage – A Machine Learning Approach**
  Developed a **predictive model** to identify **problematic internet usage patterns** and their potential mental health impacts. The study utilized advanced **feature selection**, **class balancing**, and **hyperparameter optimization** for enhanced predictive accuracy.
  Improved prediction accuracy by 15% after implementing hyperparameter tuning and class balancing techniques.
  Reduced model training time by 20% through the use of **GPU acceleration** (CUDA).
  Tech Stack: **XGBoost** (Classification), **Python** (Jupyter Notebook), **Scikit-learn**, **Optuna**, **Imbalanced-learn** (SMOTE), **Pandas**, **NumPy** (Preprocessing), **Hyperparameter tuning** with **Optuna**, **Stratified K-fold Cross-validation**, **GPU acceleration** (CUDA).

Experience

Walmart Canada (Part-time)
Position: Associate   Ajax, ON | Feb 2022 – Present
- Managed inventory by **unloading, organizing**, and **stocking products**, ensuring optimal placement for smooth store operations.
- Collaborated with team members to streamline workflows in a **fast-paced environment**, improving **backroom** and **sales floor** organization.
- Mentored new employees, overseeing **stock replenishment** to ensure timely restocking and maintain efficient operations.
- Operated **power equipment** (Bravi Sprint, Stacker, Walkie), following strict **safety protocols** for product handling and store maintenance.

Laxmi Diamond Pvt. Ltd
Position: Data Analyst   Surat, GJ | Jan 2022 - Oct 2022
- Analyzed diamond inventory, supply chain, pricing, and market trends using **SQL**, **Python**, and **data visualization tools** to ensure data accuracy and efficiency.
- Identified insights to optimize business processes, improve data integrity, and streamline workflows.
- Contributed to strategic decision-making with **data-driven recommendations**.
- Supported operations and supply chain by improving efficiency through **data analysis** and reporting.