

Muhammad Zaem Chaudhary

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Programming Languages: Python, Java, JavaScript, TypeScript, Ruby, Visual Basic, C, C++, SQL, R

Frameworks: React, Tensorflow, Pandas, PyTorch, PySpark, NumPy, Scikit-learn, Keras, XGBoost, Next.js

Tools: Git, AWS (MTurk, Sandbox), Hugging Face, Lens Studio, Jupyter, CRM, Fusion 360, Microsoft 365 Suite, Agile, Scrum, CI/CD

Education

University of Massachusetts Amherst

GPA 3.89

Expected Graduation: May 2027

BSc Computer Science and BS Mathematics - Artificial Intelligence, Data Science and Statistics

Courses : Data Structure and Algorithm, Object-Oriented Programming (Python, Java), Calculus, Linear Algebra, Statistics, C, Marketing

Experience

Snapchat (Snap Inc.) | [Github Code](#) | [Lens](#) | [Feature](#) | *Lens Studio, Blender, MySQL, Tableau*

Mar 2024 – Apr 2024

Software Developer Extern

Remote, CA

- Designed a soccer-themed AR lens incorporating Snap's Lens Studio and 3D modeling, certified by Snap Inc.'s Head of Entertainment.
- Launched a Snapchat lens inspired by Reebok and soccer, compatible with iOS and Android, gathering views from 100+ countries.
- Conducted data-driven market research in sports and technology using Tableau, and MySQL enhancing data visualization by 30%.

Data Science Intern | [Github Code](#) | [Demo](#) | *Python, Jupyter, REST API, Git, Attio, Excel, Figma*

May 2024 – July 2024

Neftwerk Inc.

Remote, PA

- Designed and sorted data from CSVs to Attio dashboards to improve client information accuracy and operational efficiency by 60%.
- Leveraged Attio's REST API to implement filtering and pagination, optimizing data retrieval by 30% and enhancing user experience.
- Engineered Python automation for Excel-to-CSV pipeline, leveraging Git version control to optimize Attio dashboard data processing.

AI Research Intern | *Python, Javascript, AWS (Amazon MTurk, Sandbox), Hugging Face and vLLM*

Sep 2024 – Present

Center for Intelligent Information Retrieval | Professor Hamed Zamani

Amherst, MA

- Building a benchmark for LLM personalization using crowdsourcing via MTurk and API-driven calls of models like GPT-4 and Llama.

ML Research Intern | [Research Poster](#) | *Python, OpenCV, Tensorflow, Keras, Matplotlib, Scikit-learn*

Jun 2024 – Aug 2024

University of Massachusetts Amherst | June Jeong (PhD)

Amherst, MA

- Optimized a CNN for sign-language recognition in Keras, achieving a 97% F1 score with data augmentation and batch normalization.
- Utilized ResNet pre-trained models to enhance accuracy to 98% and reduce overfitting, improving generalization on unseen data.

Projects

Hack(H)er413 Hackathon Winner: "Best Use of Software" | [Github Code](#) | [Demo](#) | *Next.js, Tailwind, Firebase, Gemini.ai, Assembly.ai*

- Developed an AI-driven app for customized interview preparation and organization; enhancing users' interview preparation by 35%.
- Built an interactive dashboard with a speech analysis feature, tailored feedback and scoring, streamlining user experience by 48%.

LeetBank | [Github Code](#) | [Full Stack App](#) | *React, JavaScript, HTML, CSS, ExpressJS, Firestore, Postman, GraphQL*

- Developed a full-stack React app for storing, annotating, and categorizing 3000+ LeetCode questions, streamlining coding practice.
- Built a search algorithm, enabling users to access LeetCode questions 40% faster, optimizing 6 API calls into one GraphQL request.

PomoPay | [Full Stack App](#) | *Next.js, Typescript, Google Cloud Function (GCF), Google Cloud Scheduler, Firestore*

- Created a full-stack Next.js app to track productivity using a dynamic NoSQL database, with weekly status updates managed via GCF.
- Integrated Stripe Payment Intents API for secure transactions, adding user authorization and forfeit system to drive goal completion.

Uber Data Analytics Pipeline | [Github Code](#) | [Demo](#) | *Python, Google Cloud Platform (GCP), BigQuery, Looker, Lucid, SQL*

- Implemented a data pipeline for 100000 Uber trips, conducting data analysis & modeling; enhancing data visualization and insights.
- Transformed 19 features from CSV data into a dashboard using GCS & MAGE-AI, developing a real-time Google Map for 16 regions.

Sonar Signal Classification | [Github Code](#) | *XGBoost, Python, SHAP, SMOTE, Pandas, NumPy, Matplotlib, Scikit-learn*

- Enforced XGBoost for classifying sonar signals, using SMOTE to balance the dataset; resulting in 95% precision & an 87% F1-score.
- Analyzed 20 features via XGBoost's feature importance & SHAP; revealing factors that drive classification, providing deeper insights.

Leadership & Activities

Goldman Sachs Virtual Insight Series

June 2024 – July 2024

- Spearheaded 15+ strategic sessions with senior leaders, driving technical innovations and expanding cross-functional partnerships.

Tour Guide and International Admissions Fellow

Dec 2023 – Present

University of Massachusetts Amherst

Amherst, MA

- Orchestrated on campus and virtual tours and events, showcasing UMass's vibrant environment to 1300+ prospective students.
- Managed student inquiries to ensure effective communication, ensuring data confidentiality (FERPA); classifying 3000+ Excel entries.

Activities: Secretary of UMass Cricket Club; Member of Pakistan Student Organization, Machine Learning Club and Pickleball Club.

Awards & Certificates

UMass Amherst Chancellor's Highest Merit Award (65% total tuition cost) and Dean's List Honors (all semesters)

Coursera: Stanford University - Machine Learning by Andrew Ng and Duke University - Linear Regression by Mine Çetinkaya-Rundel