

Abduaziz Umarov

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EDUCATION

University of Central Florida

May 2028

B.S. Computer Science

- GPA: 4.00
- Relevant Coursework: Data Structures & Algorithms, Computer Hardware & Logic, Object Oriented Programming, Discrete Structures
- Organizations: KnightHacks

TECHNICAL SKILLS

- **Languages:** C, Python, JavaScript, Java, SQL, Typescript, HTML, CSS
- **Frameworks & Libraries:** React, Node.js, Express, Next.js, Tailwind CSS
- **Databases & Auth:** PostgreSQL, Firebase, Microsoft SQL Server, Prisma, NextAuth
- **Data & ML:** PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, Hugging Face Transformers
- **Tools & Platforms:** Azure, Docker, Git, GitHub, Postman, Figma, OpenCV

EXPERIENCE

Undergraduate Research Assistant,

Oct 2025 – Present

ISUE Lab (Human Computer Interaction), UCF

- Built a custom speech-error dataset by comparing **15,000+** samples of control and dysarthric recordings, labeling error types and therapy advice using **Pandas** and **NumPy**.
- Developed a therapist-oriented model using **PyTorch** to generate personalized speech feedback from error patterns, reaching **~80%** consistency with verified therapy strategies.
- Conducted pilot evaluations with dysarthric speakers, to validate real-world usability, and refine feedback quality with clinician input.
- Co-authored a research paper on dysarthric speech feedback systems, contributing to sections about the dataset construction and evaluation of the therapist model.

PROJECTS

MacroMatch, Typescript, Next.js, Tailwind CSS, PostgreSQL, Prisma, NextAuth, OpenAI API

Nov 2025 - Jan 2026

- Built a full-stack nutrition recommendation platform supporting **200+** restaurant and fast-food chain menu items and personalized macro targets.
- Formulated a custom Macro Fit Score **algorithm** rank meals by proximity to user protein, carb, and fat targets, reducing manual food selection time by **~70%**.
- Integrated an AI-powered conversational assistant using the **OpenAI API** to recommend meals and substitutions based on calorie and macro constraints, generating **top 3** optimized meal suggestions per query.
- Visualized daily macro intake and progress using **Chart.js**, enabling users to maintain intake within **5–10%** of target macros.

FinBridge, Typescript, React, Express, Node.js, Tailwind CSS, Firebase, Google Gemini, Plaid API

Oct 2025

- Developed a financial intelligence system that ingests real-time bank transaction data via **Plaid API**, transforms spending patterns into actionable insights, and feeds structured financial context into an **Gemini** LLM for reasoning support.
- Devised a structured prompt pipeline that injects account balances, categorized transactions, and monthly summaries into **Gemini**, enabling context-aware financial guidance instead of generic advice.
- Leveraged **Chart.js** to create interactive financial dashboards, dynamically generating visualizing live transaction data and derived metrics within a secure, multi-user **Firebase** data model.

FlipScript, JavaScript, React, Express, Node.js, Tailwind CSS, OpenAI Whisper

Sep 2025

- Created a speech-to-study pipeline using **OpenAI Whisper**, converting audio into punctuated, timestamped transcripts suitable for learning.
- Designed an AI-driven note structuring workflow that summarizes transcripts into concise sections while highlights key concepts for study.
- Implemented automatic flashcard generation that transforms notes into editable question-answer cards optimized for active recall and spaced repetition.