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
- **Tools & Platforms:** AWS, Azure, Docker, Git, GitHub, 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 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.