Mert Bildirici

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EDUCATION

Duke University – *B.S. Computer Science, AI & ML Concentration*　　　　　　　　　　　　　　　May 2026
- **Cumulative GPA:** 3.98/4.00
- **Coursework:** Data Structures & Algorithms, Computer Systems, Database Systems, Design & Analysis of Algorithms, Topological Data Analysis, Bayesian Statistics, Probability, Machine Learning, Multivariable Calculus, Linear Algebra
- **Extracurriculars:** Statistics Teaching Assistant, Energy and Climate Club, Wayne Manor, Turkish Student Association

EXPERIENCE

Mobile App Developer – *Students Who Sit*　　　　　　　　　　　　　　　　　　September 2024 - Present
- Built an iOS app using Swift for over 120 sitters and 180 parents, streamlining childcare matching processes at Duke University.
- Reduced sitter matching time by 30% through the implementation of an automated request-handling system.
- Integrated a secure login and user management system using Firebase Authentication, ensuring data protection for all users.
- Utilized RESTful APIs to connect backend services and sync user data, improving data retrieval speeds by 20%.

Software Engineer Intern – *Tanium*　　　　　　　　　　　　　　　　　　　May 2024 - August 2024
- Developed a Kubernetes operator in Go to automate upgrades in cloud, reducing manual intervention by 80% for 230+ services.
- Integrated the operator into CI/CD pipelines, improving workflows by 40% and reducing deployment errors by 25%.
- Conducted performance and unit testing, boosting efficiency by 30% and ensuring constant uptime.
- Used CRDs to manage custom resources, enhancing operator's ability to handle complex configurations and extend functionality.

Machine Learning Research Assistant – *Duke University*　　　　　　　　　　　April 2024 - August 2024
- Conducted research on novel Protein Language Model (PLM) architectures under Dr. Naderi-Alizadeh.
- Combined protein sequence and structure data, creating models that improved predictive performance by 20%.
- Leveraged PyTorch to build neural networks, implementing deep learning and achieving a 15% increase in model accuracy.

Mobile App Developer – *Duke University*　　　　　　　　　　　　　　　　　August 2023 - April 2024
- Developed an app for Duke professors to post quizzes online, engaging 500+ active users (Java for Android, Swift for iOS).
- Utilized Firebase as the backend to develop a question bank module and integrated a feature to release questions.
- Implemented real-time notifications on Android and iOS by utilizing Firebase Cloud Messaging (FCM) topic messaging.
- Developed a Java server with Spring Boot, handling network requests and reducing notification delivery time via FCM by 20%.

Software Engineer Intern – *Valensas*　　　　　　　　　　　　　　　　　　May 2023 - August 2023
- Created a React web app enabling purchases and expenses with pre-authorized payments in low-connectivity areas such as flights.
- Built a panel with React Admin, allowing for efficient management and monitoring of transactions and provisions.
- Leveraged Postman API for retrieving transaction data and managing provisions, reducing data retrieval time by 30%.
- Implemented Multipeer Connectivity to sync transaction history across devices, enhancing data reliability by 65%.

Software Engineer Intern – *Recly*　　　　　　　　　　　　　　　　　　　　May 2022 - August 2022
- Developed solutions for critical bugs in Recly, a workout partner connection app written in React.
- Enhanced the Chat section by notifications and improved message synchronization with ReactNative.
- Cut build times from 5 minutes to 20 seconds and boosted productivity by 30% by leading backend environment overhaul.
- Extended code so users could sign in with international phone numbers, adding 200+ international users.
- Implemented Docker Compose for container orchestration, ensuring consistent deployments and proactive error handling.

TECHNICAL SKILLS

Languages: Python, Java, Go, Kotlin, SQL, R, C, C++, JavaScript, TypeScript, HTML, CSS, Swift
Tools/Frameworks: React, Node.js, Flask, Kubernetes, Bazel, Rest API, Git, Docker, JUnit, Flutter, Figma
Libraries: Matplotlib, PyTorch, pandas, NumPy, Sklearn, TensorFlow, ggplot, dplyr, Alamofire