

# Mert Bildirici

919-433-6434 | [hmb45@duke.edu](mailto:hmb45@duke.edu) | [linkedin.com/in/bildirici](https://www.linkedin.com/in/bildirici) | [mertbildirici.com](https://mertbildirici.com)

## EDUCATION

---

**Duke University** – *B.S. Computer Science and Mathematics*

May 2026

- **Cumulative GPA:** 3.98/4.00
- **Relevant Coursework:** Data Structures & Algorithms, Computer Systems, Database Systems, Design & Analysis of Algorithms, Bayesian Statistics, Probability, Machine Learning, Multivariable Calculus, Linear Algebra
- **Extracurriculars:** Statistics Teaching Assistant, Energy and Climate Club, Wayne Manor, Turkish Student Association

## EXPERIENCE

---

**Software Engineer Intern** – *Tanium*

May 2024 - Present

- Developed a Kubernetes operator in Go to automate installs and upgrades for cloud and container solutions.
- Integrated Kubernetes operator into CI/CD pipelines, improving deployment workflows and monitoring.
- Conducted performance testing, optimization, and unit testing to ensure the operator met high availability & efficiency standards.

**Machine Learning Research Assistant** – *Duke University*

April 2024 - Present

- Conducted research on novel Protein Language Model (PLM) architectures under Dr. Naderi-Alizadeh.
- Combined protein sequence and structure data, creating models for improved learning and predictive performance.
- Leveraged Pytorch to build and test neural network architectures, implementing deep learning techniques.

**Mobile Application 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 server in Java using Spring Boot, handling network requests to send notifications to students via FCM.

**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 an admin panel using React, allowing for efficient management and monitoring of flights and transactions.
- Leveraged Postman API for retrieving flight data via GET requests, and creating or terminating flights through POST requests.
- Implemented Multipeer Connectivity Framework to seamlessly sync transaction history across devices for flight attendants.

**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.

## PROJECTS

---

**Scents** | *Swift*

April 2024 – Present

- Created an app similar to TikTok and Instagram for the perfume industry, allowing users to share and explore perfume content.
- Hosted the backend on Firebase, utilizing real-time database and authentication features for secure and seamless performance.

**Mini Amazon** | *Python, Flask, React, PostgreSQL, Docker*

August 2023 – December 2023

- Developed a full-stack web application similar to Amazon, where sellers list and manage products, and users can browse, purchase, and review with virtual currency.

## TECHNICAL SKILLS

---

**Languages:** Python, Java, Go, Kotlin, SQL, R, C, JavaScript, TypeScript, HTML5/CSS, Swift

**Tools/Frameworks:** React, Node.js, Flask, Kubernetes, Postman API, Git, Docker, JUnit

**Libraries:** Matplotlib, PyTorch, pandas, NumPy, Sklearn, TensorFlow, ggplot, dplyr