EKREM ARMAGAN KARAKAS

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Available from May 2025 to January 2026

EDUCATION & ACADEMIC INFORMATION

Northeastern University Honors Program | B.S in Computer Science – Artificial Intelligence   **May 2026**
- **Achievements:** Honors Scholarship | Dean's List | GPA: 3.3/4 | Spring 2023 DKE Athletic Chair
- **Relevant Coursework:** Machine Learning and Data Mining, Algorithms & Data Structures, Theory of Computation, Object Oriented Programming, Computer Systems, Foundations of Data Science, Foundations of Cybersecurity, Introduction to Digital Design and Computer Architecture, Discrete Structures, Mathematics of Data Models

TECHNICAL SKILLS

- **Languages:** Python, R, Java, JavaScript, TypeScript, HTML, CSS, C
- **Frameworks / Tools / Databases:** NodeJS, ExpressJS, ReactJS, React Native, NextJS, Jest, AWS, Github Actions, Docker, Git, Stripe API, LLM API's, Arduino, Raspberry-PI, MongoDB, MySQL, MariaDB
- **Development Environments:** Neovim, Visual Studio Code, Jupyter Notebook, Visual Studio, Android Studio, Eclipse, Pycharm, IntelliJ
- **Operating Systems:** Linux, Windows, MacOS

PROJECTS

OktetAI – oktetai.com *(JavaScript, NodeJS, MongoDB, EJS, AWS)*   **Apr. 2024 - Present**
- Developed a platform enabling seamless interaction with multiple advanced AI models (OpenAI, Claude, Gemini, Llama) simultaneously while also allowing users to take notes and paraphrase their work.
- Published LLMRest, a modular AI client, as an NPM package, to manage integrations with multiple AI services, ensuring secure API interactions through input validation and content moderation.
- Designed scalable backend systems using Node.js, Express.js, and MongoDB, incorporating secure authentication with Google OAuth, secure email integration with NodeMailer, and payment processing with Stripe. • Deployed infrastructure on AWS using EC2, CloudFront, Certificate Manager, and Route53

Movie Success Prediction Analysis *(Python Programming, Machine Learning)*   **Nov. – Dec. 2024**
- Designed machine learning pipeline for movie success prediction using Random Forest & Gradient Boosting (94.86% accuracy, F1-score: 0.89).
- Engineered custom features, including profit and success scoring based on vote average, vote count, and popularity.
- Applied SMOTE for class balancing & conducted EDA with matplotlib/seaborn.

UK Soccer Player Valuation Analysis *(Python Programming, Machine Learning)*   **Sept. – Dec. 2023**
- Developed a machine learning pipeline to assess the market valuation of UK soccer players. This project involved comprehensive data collection, data cleansing, and the application of machine learning techniques.
- Utilized Random Forest Regression (140 estimators), achieving an R² score of 0.746, outperforming other models such as KNN and SVM regressors.

Reversi Game Development *(Java, Unit Testing, MVC Architecture)*   **Oct. – Dec. 2023**
- Utilized Java for algorithm design, game development, AI strategy implementation, and unit testing.
- Engineered a hexagonal-grid based Reversi game model in Java, adhering to standard two-player rules with variable grid size capabilities. Implemented model-view-controller architecture; the model managed game state, rules, and player interactions, and the view provided text output with scope for future graphical enhancements.

"The Future is Yours" Book Project *(Author)*   **Feb. 2019 – Jan. 2022**
- Interviewed 11 leaders, wrote and published a book, used sales revenue to donate medical devices and tablets, and received media coverage, including Hurriyet.

The Safe Election Room Project *(Arduino Programming)*   **Feb. 2018 – Jan. 2020**
- Designed a secure voting system using barcodes, sensors, and Arduino, featured in Bloomberg and Fortune 40 as a potential election solution, and won First Place at the 2019 International ROBORAVE Robotics Competition.

WORK EXPERIENCE

Unifirst, Wilmington, MA *(IT Co-op | App Development, Scripting, Tech Support)*   **July – Dec. 2024**
- Developed IT Quick Links application, a Windows-based utility streamlining access to IT resources, tools, and scripts, leveraging PowerShell and WPF.
- Implemented location-based features, including dynamic server mapping and automated printer discovery/installation, by integrating registry lookups, environment variables, and VPN detection.
- Improved operational efficiency by automating logon scripts, printer setups, and helpdesk task execution, reducing manual effort and minimizing configuration errors.
- Resolved more than 2000 tickets about hardware and software issues.

KarakaslarGroup, Izmir, Turkey *(Full Stack Engineer | PHP, JavaScript, MySQL)*   **June – Aug. 2023**
- Developed a custom web-based management system to streamline operations across Karakaslar Group's construction projects, enabling efficient approvals, expense tracking, and data entry handling.
- Implemented role-based access control for distinct account types (managers, employees, accountants) to ensure secure and efficient workflows.
- Designed dynamic search filters, paginated entry listings, and modals for entry management. • Engineered backend functionality with object-oriented PHP and MySQL, incorporating PHPMailer for sending automated notifications.

MobileX, Istanbul, Turkey *(Software Engineer Intern)*   **July 2020**
- Trained in mobile applications for iOS and Android, gained back-end system experience. Participated in the "Aura Dashboard" project, observing database queries and analytics presentation on an interactive dashboard.