

# 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, SQL
- **ML Libraries:** Scikit-learn, Pandas, NumPy, matplotlib/seaborn
- **Frameworks / Tools / Databases:** NodeJS, ExpressJS, ReactJS, React Native, Jest, Django, AWS, Github Actions, Docker, Git, Stripe API, LLM API's, Arduino, Raspberry-PI, MongoDB, MySQL, MariaDB
- **Systems:** Linux, Windows, MacOS

## PROJECTS

- i3ctl – Linux CLI Utility** (*Python, Linux, CLI, PyQt6*) Jan. 2025 - Present
- Developed a Python-based CLI tool to automate 13+ i3-Linux desktop workflows (network, workspace, power etc).
  - Engineered a modular architecture with dynamic dependency detection (PulseAudio, Blueman) and GUI using PyQt6.
- OktetAI – oktet.ai** (*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.
- Movie Success Prediction** (*Python, Machine Learning*) Nov. – Dec. 2024
- Trained an ensemble model (Random Forest & Gradient Boosting) with 94.86% accuracy (F1: 0.89) to predict box office success.
  - Engineered profit/success metrics and balanced classes using SMOTE; visualized insights via EDA.
- UK Soccer Player Valuation Analysis** (*Python, Machine Learning*) Sept. – Dec. 2023
- Built a regression model (Random Forest, 140 estimators) to predict player valuations, achieving  $R^2$  score of 0.746 (outperformed KNN/SVM).
  - Executed end-to-end pipeline: data collection, cleansing, and feature engineering.
- Reversi Game Development** (*Java, Unit Testing, MVC Architecture*) Oct. – Dec. 2023
- Utilized Java and MVC for game development, algorithm design, 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.
- “The Future is Yours” Book Project** (*Author*) Feb. 2019 – Jan. 2022
- Interviewed 11 industry 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.
  - 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
- Built a PHP/MySQL management system with role based access control, reducing approval times by 50%.
  - Implemented dynamic search filters and automated notifications, saving 40% manual data entry time.
- 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.