Edin Aleckovic

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Education:

Georgia Institute of Technology

Candidate for M.S. in Computer Science- Specializing in Machine Learning

Current GPA: **3.875**

- Completed Courses: Graduate Algorithms (CS6515), Artificial Intelligence (CS6601), Machine Learning For Trading (CS7646), Machine Learning (CS7641), AI Ethics & Society (CS6603), Video Game Design (CS6457), Natural Language Processing (CS7650), Computer Law (CS8803) | Current Courses: Network Science (CS7280), Global Entrepreneurship (CS8803)

College of Charleston Honors College

B.S. in Computer Science

Overall GPA: **3.84** | Major GPA: **3.90**

- Member of National Society of Leadership and Success
- Head of Student Athletic Advising Committee's Diversity and Inclusion Group
- Starter of Varsity Men's Soccer team.
- Received maximum merit based scholarship from the College of Charleston.
- "Outstanding Student Award in Computer Science" from the College of Charleston

Experience:

Georgia Institute of Technology - Atlanta, GA

Role: Graduate Projects

- Supervised Learning Algorithms: Analyzed Decision Trees, Neural Networks, and SVMs for binary and multiclass classification, optimizing performance through hyperparameter tuning and validation on various datasets
- Dimensionality Reduction & Clustering: Applied PCA, t-SNE, and clustering techniques (K-Means, EM) to enhance data interpretability and model accuracy for various datasets.
- Markov Decision Processes: Modeled decision-making in stochastic environments using value iteration and policy iteration to derive optimal policies.
- Neural Networks & Unsupervised Learning: Combined clustering features with neural networks to improve predictions and analyze synergies with dimensionality reduction methods.
- Predictive Models for Financial Markets: Built predictive models for financial market trends using time series analysis and machine learning techniques (Python, Pandas, NumPy), achieving improved prediction accuracy.
- NLP Models with Attention Mechanisms (Generative AI): Implemented a Key-Value Memory Network and explored transformer-based techniques to enhance question-answering tasks in NLP, leveraging attention mechanisms for efficient key-value retrieval and response generation.
- Collaborated with a team of 5 to develop a video game in Unity, leading level design and implementation, creating AI enemy behavior, and designing dynamic traps to enhance gameplay and player engagement.

College of Charleston - Charleston, SC

Role : Researcher/Developer

- Built *Piddle*, an open-source, cross-platform Ed-Tech app using Flutter and Firebase, enabling real-time ConcepTest administration and analytics for Peer Instruction.
- Integrated Firebase for authentication and scalable cloud storage, ensuring reliable quiz hosting and seamless question bank contributions.
- Implemented role-based access, allowing teachers to create/administer quizzes while students participate interactively across web and mobile platforms.

Role : Researcher/Data Scientist

- Analyzed adversarial vulnerabilities in One-Class Classification models (OCC-SVMs, Autoencoders), evaluating the impact of poisoning attacks using the CIC-IDS2017 cybersecurity dataset.
- Developed ML models for anomaly detection in intrusion detection systems, testing resilience against label-flipping, noise addition, zero-out, and random-column-sampling attacks.
- Conducted experiments and presented findings on poisoning resilience in OCC models, using Python, TensorFlow, and Scikit-learn to optimize hyperparameters and propose defensive strategies.

Charleston Bike Taxi - Charleston, SC

Role : Transportation Expert

- Handled over 50 customer dispatches per day and organized transportation services throughout Charleston, SC.
- Successfully balanced the demands of full-time work, supporting myself financially while excelling as a Division 1 men's soccer player, graduating in three years, and maintaining academic standing as a member of the Honors College.

Skills:

Programming: Python, C++, Flutter SDK, SQL, PHP, HTML, CSS, JavaScript, Firebase, React, Next.js, Three.js, TensorFlow, PyTorch, Jupyter Notebook, Git, JSON, Unity, C#, Keras

Data Analysis & Modeling: Pandas, NumPy, Matplotlib, Seaborn, Time Series Analysis, Statistical Modeling, Dimensionality Reduction

Concepts: Object-Oriented Programming, Data Structures, Algorithms, Discrete Mathematics, Linear Algebra, Agile Development, Serialization, Machine Learning, Reinforcement Learning, Supervised Learning, Unsupervised Learning, OCC Classification,

Collaboration: Presentations, Public Speaking, Meetings, Time Management, Team-Based Problem Solving, Stakeholder Communication,

Language: English (Native), Bosnian (Native), Spanish (Advanced)