Prince Ahmed

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Education

Duke University — **Class of 2024**
Bachelor of Science in Computer Science and Physics minor — *Durham, NC*
- **GPA**: **3.963**/4.0 and **4.0** Major GPA
- **Karsh International Scholar**: 1 of 5 out of the student body to receive a full ride merit based scholarship of $340,000.
- **Coursework**: Advanced Software Engineering, Machine Learning, Algorithms, Advanced Networks, Databases.
- Duke Applied Machine Learning, Men Rowing Team, Modern Dance, Guitar, Photography, Languages - Italian, Spanish.

Work Experience

Rumie — January 2024 – Present
Software Engineer Intern — *Remote*
- Developing backend serving approximately **6000 users**, to browse, book, and manage dress rentals.
- Successfully deployed a highly available server on AWS utilizing GraphQL, MongoDB, Express.js and TypeScript.

Finesse Formula LLC - Recly — May 2023 – August 2023
Software Engineer Intern — *Naples, FL*
- Redesigned home screen sections to allow users to find partners and future workouts immediately.
- Reduced React app load time by **60%** by refactoring several initial NestJS API calls.
- Added multi language support to resolve a common pain point for customers representing **35% in ARR**.

Duke Office of Information and Technology — May 2022 – August 2022
Software Engineer Intern — *Durham, NC*
- Automated review of 20,000+ grant proposal PDFs to find similarities, reducing manual effort from days to 15 minutes.
- Led team of 6 to architect a Transformer Natural Language Processing (NLP) pipeline that achieved a **94% accuracy**.
- Deployed web app with university Auth, Docker and maintained the GitLab **CI/CD pipeline** through a Linux VM.
- Managed team and product using Jira, conducted stakeholder interviews, set requirements and acceptance criteria.

Projects

Restaurant Recommendation App | *React, Ruby on Rails, PostgreSQL, Swift* — January 2023 - September 2023
- Led a team of 5 in the development of an app with **$7000 raised** that aims to allow groups to choose restaurants.
- Crafted a prototype for user testing resulting in **91% user satisfaction rate** from **600+ people** at Duke and London.
- Designed efficient Rails REST APIs enabling the Swift app to search, create dining groups, and voting on restaurants.

LOGO programming IDE | *Java, JUnit tests, IntelliJ* — February 2024
- Developed UI, turtle model, controllers and LOGO parser in a team of 4.
- Refactored code to utilize inheritance, abstract classes and follow observer/subscriber design principles.

Decentralized YouTube | *Python, TypeScript* — December 2023
- Implemented Chord Protocol in a peer-to-peer streaming network with consistent hashing for distributed system.
- Incorporated Adaptive Bitrate Streaming to ensure seamless video quality adjustment to available bandwidth.

Research

Light Sleep Detection Algorithm using EEG — January 2024 - Present
- Leveraged publicly available annotated EEG datasets to develop and train Convolutional Neural Network (CNN) models, achieving high-accuracy detection of light sleep stages.
- Conducted research on innovative in-ear EEG devices, focusing on design and development to minimize user discomfort while ensuring real-time detection of light sleep phases.

Ring Attractor Model Research Assistant | *Python, Object Oriented* — January 2022 - May 2022
- Collaborated in team of 2 to create a Python representation of a network model consisting of over **200 neurons**.

Leadership

Undergraduate Teaching Assistant — January 2023 – Present
- **Discrete Math** - Led recitation for 30 students - fostered collaboration and lectured more complex material.
- **Server Side Web App** - Held office hours and provided technical support for Ruby on Rails projects to a class of 70.

Skills

Programming Languages: JavaScript, Java, Python, Swift, C, Ruby, SQL, TypeScript.
Technologies: React Native, Vue, React, Ruby on Rails, Docker, AWS, Git, VS Code, Jira, Nginx, Linux.