Abdul-Karim K. Rai

Portfolio: aykae.com/projects | GitHub: aykae | LinkedIn: A.K. Rai

EDUCATION

UNIVERSITY OF PENNSYLVANIA   Philadelphia, PA
M.S.E. in Computer Graphics and Game Technology   Aug 2022 - May 2024
Relevant Coursework: Natural Language Processing, Procedural Graphics, Engineering Entrepreneurship

THE PENNSYLVANIA STATE UNIVERSITY   State College, PA
B.S. in Computer Science   Aug 2019 - May 2022
GPA: 3.830/4.000; Honors: Cum Laude
Relevant Coursework: Systems Programming, Machine Learning & AI, Database Management

EXPERIENCE

FRANKLIN DAO   Philadelphia, PA
Blockchain Developer, Development Committee   Sep 2023 – Present
- FranklinDAO is a decentralized autonomous organization (DAO) founded by University of Pennsylvania students
- Building data retrieval API software for FranklinDAO's UPenn Community Ethereum Node w/*Golang* and *Kubernetes*

PENN BIOTECH 3D FABRICATION LAB   Philadelphia, PA
3D Printing Lab Intern   Jun 2023 – Present
- Providing a robust 3D printing service (SLA, FDM, MicroFab) for researchers at Penn's Medical, Veterinary, Dental schools

APPIAN CORPORATION   McLean, VA
Software Engineer Intern   Jun 2021 – Aug 2021
- Worked on an agile team of 10 that developed resilient services in *Java*, using *Apache Kafka* and *Zookeeper*
- Repurposed Grafana dashboards to display Prometheus times series' for new *Kubernetes* sites
- Won Intern Hackathon: built-in image search for UI Builder + *OpenCV* native image effect API (*Django*)

LOCKHEED MARTIN / NITTANYAI   State College, PA
Research Intern   Aug 2020 – Jan 2021
- Worked on a team of 6 to research and deploy drone rescue simulation environments in *AirSim*
- Developed an *OpenCV Python* application allowing simulated drones to parse LiDAR point cloud data

ABC FINANCIAL SERVICES   Dallas, TX
Software Engineer Intern   Jun 2020 – Aug 2020
- Used *NLTK* sentiment classifier to handle gym member freeze requests during COVID-19 Pandemic
- Developed a Python API (*Django*) to allow integration of ML model into automated pipeline

PROJECTS + VENTURES

SENTGEN: Grammar-Based Sentence Generator | aykae.com/compling   Aug 2023
- Procedural sentence generator written in *Python*, hosted on *AWS Lambda*; based on Prof. Hayes' phrase structure rules

STARBOX: Decorative Animated LED Signs | aykae.com/starbox   Nov 2022 - Feb 2023
- Decorative desk accessory that displays procedurally generated star patterns using an LED matrix and *MicroPython*

EASYA: Spaced-Recall iOS Study App | aykae.com/easya   Aug 2020 - Present
- Published to App Store (7.5K installs) under our ed-tech company Tryber Inc.
- Designed and developed the app with *Swift*: UIKit, Alamofire, iOSMath
- Developed a REST API with *Django*, deployed to *AWS EC2*, *S3 buckets* for media storage

SKILLS + INVOLVEMENT

Technical Skills: Python, Java, Solidity, Swift, Django, C++, Git, AWS, Fusion 360, CircuitPython
Orgs: Developer for FranklinDAO; Contributing Writer for Fenjan Magazine; Social Media Editor for Onward State
Languages: Native in English; Conversational in Arabic, French; Beginner in Mandarin