

# Abdul-Karim K. Rai

Philadelphia, PA | [hi@aykae.com](mailto:hi@aykae.com)

Portfolio: [aykae.com/projects](https://aykae.com/projects) | GitHub: [aykae](https://github.com/aykae) | LinkedIn: [A.K. Rai](https://www.linkedin.com/in/A.K.Rai)

## EDUCATION

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### UNIVERSITY OF PENNSYLVANIA

M.S.E. in Computer Graphics and Game Technology

Relevant Coursework: Natural Language Processing, Cryptography, Engineering Entrepreneurship

Philadelphia, PA

Aug 2022 - May 2024

### THE PENNSYLVANIA STATE UNIVERSITY

B.S. in Computer Science

GPA: 3.830/4.000; Honors: Cum Laude

Relevant Coursework: Systems Programming, Machine Learning & AI, Database Management

State College, PA

Aug 2019 - May 2022

## EXPERIENCE

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### FRANKLIN DAO

Blockchain Developer, Development Committee

- [FranklinDAO](#) is a decentralized autonomous organization (DAO) founded by University of Pennsylvania students
- Building AMM arbitrage bot on FranklinDAO's [Community Ethereum Node](#) w/ *Solidity* and *Typescript*

Philadelphia, PA

Sep 2023 – Present

### PENN BIOTECH 3D FABRICATION LAB

3D Printing Lab Intern

- Providing a robust 3D printing service (SLA, FDM, MicroFab) for researchers at Penn's Medical, Veterinary, Dental schools

Philadelphia, PA

Jun 2023 – Present

### APPIAN CORPORATION

Software Engineer Intern

- 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*)

McLean, VA

Jun 2021 – Aug 2021

### LOCKHEED MARTIN / NITTANYAI

Research Intern

- 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

State College, PA

Aug 2020 – Jan 2021

### ABC FITNESS

Software Engineer Intern

- 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

Dallas, TX

Jun 2020 – Aug 2020

## PROJECTS + VENTURES

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### SENTGEN: Grammar-Based Sentence Generator | [aykae.com/compling](https://aykae.com/compling)

- Procedural sentence generator written in *Python*, hosted on *AWS Lambda*; based on Prof. Hayes' [phrase structure rules](#)

Aug 2023

### STARBOX: Decorative Animated LED Signs | [aykae.com/starbox](https://aykae.com/starbox)

- Decorative desk accessory that displays procedurally generated star patterns using an LED matrix and *MicroPython*

Nov 2022 - Feb 2023

### EASYA: Spaced-Recall iOS Study App | [aykae.com/easya](https://aykae.com/easya)

- 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

Aug 2020 - Present

## SKILLS + INVOLVEMENT

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**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