Onsang Felicia Yau

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EDUCATION

University of Pennsylvania, Philadelphia, PA   08/2022 - **05/2024 (Expected)**
  Master's of Computer and Information Technology (*On-campus*)   *GPA: 3.8/4.0*
  Dean's Master's Scholar | 2023 Grace Hopper Celebration Virtual Scholarship Recipient (by Penn WiCS)

Cornell University, Ithaca, NY   08/2018 - 05/2022
  BS in Animal Science   *Major GPA: 3.9/4.0; Overall GPA: 3.7/4.0, Cum Laude*
  Morrison Award | Herman R. & Winnifred C. Schenkel Scholar | William C. Hooey Scholar | CALS Student Advisory Council

Relevant Coursework:
  Software Development • Algorithm Design • Data Structure • Machine Learning • Algorithms and Computation • Operating System • Computer System Programming • Web Application Programming • Internet & Web System • Data Science

TECHNICAL SKILLS

Programming Languages: Java • Python • C • JavaScript • C++ • R • x86 Assembly | **Full Stack Development:** Figma • REST API's • Git • CSS • HTML • Bootstrap • Express • NodeJS • React • MongoDB • AWS S3 • CICD Pipeline | **Mobile App**: Android | **Data Analytic:** Stata • Jupyter • Pandas • NumPy • Matplotlib • Scikit-learn • SciPy • Stats-models • Seaborn | **Systems:** MacOS • Linux • Multithreading

SELECTED PROFESSIONAL EXPERIENCE

Cloud, Network, and Digital Service Engineering Graduate Intern, the MITRE Corporation, Remote   05/2023 – 08/2023
- Assisted in designing and developing a front-end web form for data collection using HTML, CSS, and JavaScript, integrating it with a MongoDB-managed back-end
- Collaborated on the development of an API using Python Flask or Django to handle data submission and retrieval and integrate the front-end form with the back-end API. Implementing features such as unique ID generation, auto-fill, and update capabilities and constructed a relational database for data storage
- Hosted the web form on GitHub, conducting user acceptance testing, and documenting system procedures for team reference

Software Engineering Intern (Python), Ithaca, NY   06/2019 - 08/2019
Sustainable & Digital Animal Agriculture Research Internship | Kristan Reed Lab | Cornell University
- Integrated a bovine disease simulation module in the Ruminant Farm System (RuFas) for whole-farm nutrition flow analysis to predict individual farm productivity and environmental impacts (Poster Link)
- Processed survey data of incidence of Ketosis, Mastitis, and Milk Fever in U.S farms, calculated specific average incidence rate, and compared to an assigned incidence rate for each cow to determine disease occurrence

SELECTED PROJECTS

Cloud/DevOps Engineer, CIS5550: Internet and Web System Project   08/2023 – **Present**
- Web Server Development in Java: architecting and enhancing an HTTP server, progressing from static to dynamic content; integrated HTTPS support, session management, and deployed on Amazon EC2
- Data Storage and Analysis: engineering an in-memory and persistent key-value store, followed by the design and refinement of an analytics engine, all implemented in Java.
- Search Engine Implementation: constructing a Java-based distributed web crawler and indexer, culminating in a comprehensive cloud-based search engine utilizing PageRank algorithms

Full-stack Development Engineer, *SocialGround Web App* (Project Link)   09/2022 – 12/2022
- Spearheaded a team of four in building SocialGround, a MERN stack-based social media app with optimized UI/UX design through Figma and Bootstrap, integrating 15 custom components
- Developed 8 REST API endpoints using NodeJS and React, and architected a scalable MongoDB database, leveraging AWS S3 for efficient image storage
- Implemented Agile methodologies and Git for seamless project management and code collaboration, enhancing product quality by 20% through identifying and resolving 80+ bugs using Cypress for end-to-end testing

Backend System Engineer, *LC4 Assembler/Disassembler Operating System Project*   09/2022 – 12/2022
- Developed and tested a simplified assembler / disassembler that enables file Input/Output and translation of the LC4's Instruction Set Architecture (ISA) in assembly files to machine codes, and vice versa (in C Language)

Data Analyst, *Bovine Sensor Data Analysis Project*   02/2021 – 05/2021

- Partnered with a 4-person team to develop two predictive models for cow survival and profitability assessment, using Python, Scikit-learn, and Stats-models (374 features and 85,981 observations)
- Implemented data normalization and feature engineering using Python-based tools, and used Git for version control throughout the project

SELECTED TEACHING EXPERIENCE

Teaching Assistant, *CIT5900: Programming Language & Techniques (20 hrs/week)* 08/2023 – **Present**
- Led weekly Python and Java tutorials for 110 students, creating coding challenges and quiz materials
- Hosted individual office hours, debugging 20+ projects and grading 30+ assignments weekly

SELECTED HACKATHONS

MeCoo – 2023 FemmeHacks *Product Manager & Front-end Developer* (Devpost Link) 02/2023 - **Present**
- Won the "Most Innovative Award" out of 21 team submissions
- Managed a 4-person team to develop a thermos-sensory bracelet that provide a seamless menopausal care experience for all; coded the MeCoo android application using Android Studio (AS) as platform, Java as language, and XML for layout

Menoasis – 2022 Health Hackathon, *Project Manager* (Project Pitch Link) 02/2022
- Managed a 6-person team to create a 15-minute Immersive Health recharge experience to empower menopausal women in the workplace

Farm eTech – 2021 Digital Agriculture Hackathon, *Frontend Developer* (Project Pitch Link) 03/2021
- Proposed a web platform coupled with SNS message system that provides agricultural insights to small-scale farm owners based on processed and translated remote-sensing satellite data (RGRI, NDVI, and NDWI)

Nourish – 2021 Animal Health Hackathon, *Product Development & Frontend Developer* (Project Pitch Link) 02/2021
- Led a 5-person team to develop and pitch a real-time feline nutrition data service that combines software and hardware implementation for indoor cat nutrient monitoring