IVAN FERDO JAYAPURNA

Berkeley, CA • (510) 708-9932 • ivanfj@berkeley.edu • linkedin.com/in/ijayapurna • ivanjayapurna.github.io

EDUCATION

University of California, Berkeley

PhD in Applied Science & Technology   Aug 2019 – Present
- Research and coursework focus in soft and biological materials science & engineering, computational biology, and machine learning

B.A. in Computer Science   Aug 2015 – May 2019
- Coursework in data structures, computer architecture, efficient algorithms and intractable problems, machine learning, computer graphics, computational photography, and computer vision

B.S in Chemical Engineering   Aug 2015 – May 2019
- Coursework in thermodynamics, transport, separations, kinetics and reaction engineering, dynamics and control of chemical systems, engineering molecules, and chemical process design

RESEARCH

Ting Xu Group | UC Berkeley, CA

Graduate Student Researcher   Aug 2019 – Present
- Rational design of bioactive plastics for biodegradable electronics, specifically involving:
    - High-throughput random heteropolymer (RAFT) synthesis.
    - Polymer-protein binding fundamental studies.
    - Software development for high-throughput protein surface characteristic mapping.
    - Deep learning to extract biologically meaningful features from polymer sequences.

Undergraduate Researcher   Dec 2016 – May 2019
- Invented a novel block copolymer for gas barrier material applications (publication pending).
- Developed software tools to streamline internal workflows i.e. a block copolymer synthesis planner.

SWARM Lab (Pister Group) | UC Berkeley, CA

Undergraduate Researcher   Jul 2018 – Dec 2018
- Built a mesh-networked, micro-robot swarm simulator for developing networking algorithms.
- Image processing to generate training datasets for low-power convolutional neural networks.

INDUSTRY

Visolis | Berkeley, CA

Software Engineering & Data Science Intern   Dec 2017 - Jul 2018
- Built a data-driven biochemical synthesis tool of 500,000+ computationally predicted pathways.
- Saved $10,000+ by building a text-to-SQL parser-scraper, for a comprehensive enzyme repository.
- Populated a graph database of 1,000,000+ records from literature and created traversal heuristics.

TEACHING

UC Berkeley Graduate Student Instructor, Polymeric Materials (MSE 151)   Jan 2020 - May 2020
- Sole student instructor teaching polymer chemistry and polymer physics to 60 undergraduates.
- Designed all course materials: presentation slides, homework, group project materials and exams.

Entrepreneurial Skills Education Lead, UC Berkeley Sigma Eta Pi   Jan 2019 - May 2019
- Designed a curriculum to teach useful skills and knowledge for entrepreneurship inclusive of ideation, market research, design, marketing, product iteration, networking, decking and pitching.
- Led an education team of 3, to teach a class of 12 students to go from nothing to delivering product pitches to venture capitalists within a 10-week period.

LEADERSHIP & ENTREPRENEURSHIP

American Institute of Chemical Engineers, UC Berkeley Student Chapter

VP Finance → External VP → Senior Advisor   Apr 2016 – Apr 2019
- Increased annual corporate funding by 110% via a new sponsorship package and outreach strategy.
- Led a team of 12 to organize 10+ corporate info sessions and 3 formal networking events.
- Created a course guide and resume database for Berkeley chemical engineering undergraduates.
- Designed a new mentor-mentee program pairing 40 upperclassmen and underclassmen.

Chec Consulting | Berkeley, CA

Cofounder & Consultant   Jul 2017 – Aug 2018
- Founded the organization with a team of 6; managed recruiting and team structuring.
- Designed a new microfluidic device to optimize pathogen capture rate by modelling flow in COMSOL.

Wristband International | Bangkok, Thailand

Cofounder   Dec 2012 - Jan 2015
- Founded the largest online custom wristband business in Bangkok.
- Managed a sales team of 50+ people & sold 100,000+ silicone wristbands over 2 years.

LANGUAGES & INTERESTS

Languages: English, Indonesian, Chinese

Interests: Bioactive Plastics, CleanTech, FoodTech, Machine Learning in Chemistry & Biology, Robotics & Automation, Soccer, Chelsea FC, Electric Skateboards, Computational Art, Writing