YIDING FANG COMPUTER SCIENCE, UNIVERSITY OF CALIFORNIA SAN DIEGO

class of 2018

WORK EXPERIENCE & INTERNSHIPS

Becton Dickinson, San Jose, CA
Software Development Intern, August 2017 - October 2017
- Explored and compared neural net architectures for cell classification
- Implemented convolutional neural network in Python using TensorFlow

SAP Labs, Palo Alto, CA
Software Development Intern, February 2017 - August 2017
- Developed and tested Java REST services for Edge IoT services
- Developed user interface using Javascript, JQuery & SAP UI5 framework
- Developed predictive analytics modules for OSGi & container landscapes
- Explored container lifecycle management with Kubernetes

Center for Computational Biology & Bioinformatics, La Jolla, CA
Bioinformatics Intern, June 2016 - Present
- Designed and implemented pipeline for shotgun metagenomics analysis
- Used Jupyter, Matplotlib to visualize and summarize plugin outputs

Oculeve, South San Francisco, CA
R&D Intern, June 2015 - January 2016
- Debugged, assembled, and tested PCB prototypes for Allergan TrueTear
- Programmed PIC family microcontrollers in C for testing automation

Scripps Research Institute: Marcondes Lab, La Jolla, CA
Biosystems Intern, January 2016 - March 2016
- Performed network analysis using jActiveModules and Cytoscape

PROJECTS

SD Hacks 2016: RoboPi, La Jolla, CA
Programmer, October 2016
- Created mobile smart home robot with Rasperry Pi using Python and OpenCV blob recognition to allow RoboPi to track and follow user
- Integrated Amazon Alexa API with Pi to accept smart home commands

Kale Studios: Turnip, La Jolla, CA
UI Specialist, March 2016 - June 2016
- Developed Android front end for spontaneous event planning application
- Implemented queries and designed REST calls to SQLite database
- Integrated Google Maps and Places APIs for the in-app map view
- Turnip available for Android on the Google Play Store or at turnip.tk

San Diego Smart City Hackathon 2016: OneDrop, La Jolla, CA
Programmer, May 2016
- Developed Android front end for water use awareness application
- Utilized Teradata technologies to parse San Diego City water data and implement database calls

Engineering World Health, La Jolla, CA
VP-Operations, Workshop Chair, Programmer January 2015-present
- Developed software for low-cost medical device based on Roche HIV viral load detection kit using Arduino / ATMega microcontrollers
- Implemented user interface and business logic for PCR Thermocycler
- Implemented PID to modulate vacuum pumps for RNA transcription
- Designed and led low-cost pulse oximeter and breathalyzer workshops teaching basic programming principles in Python and C
- Developed Arudino code for analog signal acquisition and denoising

PUBLICATIONS & HONORS

(2016) San Diego Smart City Hackathon: Finalist, Best in IOT
(2016) SD Hacks: Qualcomm Prize Winner
(2017) Brain, Behavior, and Immunity 65, 210–221 doi: 10.1016/j.bbi.2017.05.004.

PROGRAMMING

Java, C, C++
Python, SciPy
Javascript, jQuery, React
HTML, XML
BASH Script
Assembly
System Verilog

PROTOTYPING

Arduino, ATMega
Raspberry Pi
PIC Microcontrollers

DESIGN

Adobe Photoshop, Indesign
Latex

EDUCATION

Advanced Data Structures
Design & Analysis of Algorithms
Theory of Computability
Components of Digital Systems
Intro to Computer Architecture
Principles of Operating Systems
Software Engineering
Programming Languages
Intro to Artificial Intelligence
Neural Networks & Deep Learning

LANGUAGES

Native English
Fluent Chinese
College Spanish

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