

Induja Chandrakumar

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Experience

TD Bank/UGO Wallet – Back-End Developer May 2017 - Present

- Designed RESTful Node JS API and SQL databases to provide rates for TD services
- Generated spoken responses to client questions using Alexa and Google Home APIs
- Automated builds of the UGO Wallet app upon commit, using Maven with Jenkins
- Detected barcodes from images with computer vision using OpenCV

Doxey Lab, University of Waterloo - Undergraduate Bioinformatics Researcher February 2016–April 2017

- Analyzed large genomic data via analysis pipelines and bash/python scripts
- Extracted new information about the evolution in *Arabidopsis thaliana*, by searching large databases

Lolle Lab, University of Waterloo – Research Assistant May 2016–August 2016

- Created bash scripts to determine support in the data for the supervising professor's hypothesis
- Communicated the workings of my programs to a non-technical professor of plant biology
- Performed hands-on biology: isolating DNA from plant samples, gel electrophoresis, etc.

Education

University of Waterloo · Bachelor of Computer Science, Honours 2015–2019

- Selected Coursework: Data Structures and Algorithms · Probability · Object Oriented Design

University of Waterloo · Bachelor of Science – Biology, Honours 2015–2019

- Selected Coursework : Bioinformatics · Human Physiology · Statistics · Computational Neuroscience

Projects

^/Hour of Regex/\$ (Android, Java, Regex) September 2016

- Created tutorial app to interactively teach the basics of Regular Expressions
- Acquired 5000+ users, from over 85 countries
- App available on Google Play Store

Bacterial vs. Archaeal Sequence Classifier (Python, Tensor Flow) May 2017

- Developed algorithm to distinguish between snippets from bacterial vs. archaeal genomes
- Leveraged Tensor Flow and Keras to train a convolutional network that categorizes sequences
- Used Bash scripting and online sequence databases to generate training data

Science Advisor - University of Waterloo Robotics Team, Mars Rover September 2015–September 2016

- Collaborated on science plan as only biologist on tech-oriented team of chemists and engineers, using both own knowledge about extremophiles and copious amounts of research/literature searches
- Developed skills in programming for robotics using the ROS (Robot Operating System) framework

Languages

Proficient in: Java, C++, Python, Node.js, SQL

Exposure to: C, Racket/Scheme, Scala, R, MATLAB, HTML/CSS, React, MongoDB, Tensor Flow

Research Interests

All things genomics · Evolution · Machine learning applied to biological data