# KRIZTOPER D. URMENETA

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## **EDUCATION**

## UNIVERSITY OF THE PHILIPPINES VISAYAS TACLOBAN COLLEGE

Tacloban City, Leyte

Bachelor of Science in Computer Science

Aug 2014 - Jun 2019

Relevant Coursework: Software Engineering; Databases; Algorithms; Data Structures; Operating Systems

### WORK EXPERIENCE

## PRIMARY SOFTWARE DEVELOPMENT CORP

Cebu City, Cebu

Jun 2017 - Jul 2017

Research and Development Intern

• Demonstrated a framework with 2 other tools the developers applied to rapid application development.

- Developed prototypes and 1 major application using the framework with teammates.
- Assessed 3+ useful features of the framework.
- Reviewed submitted code by other developers which lessened the merging issues by 90%.

## **CERTIFICATIONS**

# Philippine National IT Standard Level 2 FE(Fundamental IT Engineers) Certification Exam https://www.philnits.org/passers201510.html#Oct2017FE

Oct 2017

• A government-certified IT fundamentals exam based on Japan's biggest IT engineers standard exam.

## **PROJECTS**

# **UPVTC Sports Equipment Inventory System (UPVTC SEIS)**

Java, JDBC, MySQL

- Spearheaded the project with a team of 1 designer and 2 developers.
- Implemented reporting tools for displaying reports of the program after every 1 or 2 months.
- Operated window builder tools that reduced development time by 1 or 2 weeks.

#### Connect 4 vs Al Game

Java

- Created a normal AI which can beat an average player by at least 20 over 50 games.
- Decreased the number of moves evaluated by over 30% through alpha-beta pruning.
- Designed the AI that outputs a score between the range [-50000, 50000] which shows who's winning.

# **CPU and Disk Scheduling Algorithm Visualization**

Java, JavaFX

- Prevented deadlocks by ~90% in the allocation of CPU memory.
- Initiated real-time visualizations with near 0 delays on all windows.
- Doubled development performance by using visualization tools that reduced development time by 2 weeks.

# **EC Programming Language**

Java, JUnit

- Collaborated with teammates on the full design of the grammar rules with at least 12 language features.
- Introduced regular expressions on code tokenization which decreased development time by 2 to 3 weeks.
- Initiated unit testing that removed manual testing, which operates in <1 sec. on language validation.

## **Ensemble Image Colorization using CNN**

Python, Tensorflow, Keras

- Minimised the average colorization error to ~0.005 using an ensemble of neural networks.
- Surveyed correspondents and reached a high naturalness test score of 84.8%.
- Eliminated around 2 extra processes involving users by automating the process.

# Image Compression using Modified SVD

Python, Jupyter Notebook

- Performed compression while maintaining naturalness by an average of 30.46%.
- Uncovered that the compressed images could fool people 30% of the time.
- Co-authored with 3 other students a research paper about the results.

## **Foodesire Web App** (https://foodesire.herokuapp.com)

Ruby on Rails, PostgreSQL

- Expanded the publicity by ~20% by adding a Facebook sharer feature.
- Launched the asynchronous update of all user interfaces in real-time with <1 sec. delay.
- Conducted a test launch with constructive feedback from 14 correspondents.

### SKILLS

(**Development**): Java, Python, C, Ruby, Ruby on Rails, PHP, Laravel, (**Databases**): SQL, MySQL, PostgreSQL, (**DevOps**): Git, (**Testing**): JUnit, (**SDLC**): OOP, UML, Agile, Jira, (**Libraries**): JavaFX, (**OS**): Windows, Linux