HUNG DUC NGUYEN

(508) 332-2910
hungnguyen@clarku.edu

EDUCATION

Clark University **Worcester, MA** **Expected May 2018**

- **Bachelor of Arts**; Double-Major in *Computer Science* and *Studio Art*; Minor in *Mathematics*
- **Math/CS GPA**: *3.70/4.00*; **Dean's List**: All Semesters, 2014, 2015, 2016
- **Relevant Coursework:**
  Linear Algebra, Multivariate Calculus, Data Structures, Algorithms, Analysis of Programming Language, Assembly Language & Computer Organization, Probability & Statistics, Operating System, Software Engineering, Computer Networking, Database Management & Systems Design, Distributed Systems (WPI);
  Online Courses: Machine Learning (Stanford), Full Stack Web Dev (HKUST)

TECHNICAL SKILLS

- **Programming:** Object-Oriented Design, Test-Driven Development, Unit and Integration Testing
- **Languages:** HTML, CSS, JavaScript; Java, C, Python; JSON, XML, SQL; Assembly, Scheme, Pascal
- **Frameworks/Libraries:** JGraphX, Bootstrap, jQuery, NodeJS, ReactJS, Socket.io, Sequelize, Mocha, Chai
- **Other Tools:** Git, IntelliJ, Android Studio, Unix/Linux; Postman; Abode Photoshop, Illustrator, InDesign, Sketch

WORK EXPERIENCE

Software Engineer Intern **Axispoint Inc., New York, NY** **May 2017 - Aug 2017**

- Wrote performance test for *Sequelize*, *pg-promise* library; reduced *PostgreSQL* database query time by *30%*
- Built *Scrum Poker*, a web app for scrum masters to make planning sessions for *Agile Software Development*
- Designed the *user interface*, controlled its workflow and interactions with users (*ReactJS, Bootstrap, jQuery)*
- Implemented underlying database for *9 users* and real-time server-client communication (*NodeJS, Socket.io)*
- Wrote unit, integration testing for database, front-end components, and server-client sockets (*Mocha, Chai)*

ADDITIONAL EXPERIENCE

Swoop Social Media **Coursework Project, Clark University** **Sept 2017 - Dec 2017**

- Building an *Android app* for *social media platform* focusing on a *smart and fast* voting mechanism
- Implemented the *SQLite* database models and handlers; Designed the style guide, logo, avatar and template
- Followed the *Agile methodology* (3-developer team) to increase speed and productivity by *40%*
- Implementing: *Machine Learning* for *Image Segmentation*, *in-depth research for Scalability*

Chess AI Engine **Directed Study, Clark University** **Sept 2017 - Dec 2017**

- Building a *Chess JavaScript AI engine* which should optimally generate moves in average 2 seconds/move
- Implemented AI algorithms: *Negamax, Alpha-beta pruning, Board Evaluation, Razoring, Aspiration Window, Iterative Deepening, Principal Variation Search, Quiescent Search, Futility Pruning, Search Extensions*
- Other data structures for positions and good moves: *Transposition Table, Killer Heuristic, History Heuristic*
- Achieved ELO Rating: *~ 2000 points* (2200 Candidate Master, 2400 International Master, 2700 Grandmaster)

IUCN Visualizer **Directed Study, Clark University** **July 2016 - July 2017**

- Built a *Java app* for scientist in the IU for Conservation of Nature to conceptually visualize biological systems
- Integrated *database parser* for *CSV* files and developed features for graphs with database
- Designed a *dynamic graph legend*, updating constantly all information on the graph (*JGraphX, XML, Sketch)*
- Refactored, documented the whole source code, *improving the readability* without affecting performance

Scheme Interpreter **Coursework Project, Clark University** **Sept 2016 - Jan 2017**

- Built a *Scheme interpreter* by *C* to parse and evaluate Scheme functional input
- Implemented the input functional *parsing mechanism* for *pre-defined, user-defined, recursive functions*
- Coded the *evaluation method* for arithmetic and logic operations to deal with the base case in recursion
- Designed an abstract *cons-cell* structure and *s-expressions* structure for nested-list data