

Wassim Gharbi

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Portfolio <http://gharbi.me/>

B.S. Computer Science, Minor in Mathematics, GPA 3.86

Lafayette College ('19), Easton PA

WORK EXPERIENCE

Software Engineering Intern

Google, Mountain View, CA

May 2017 - Aug 2017

Worked as part of Google Search's AMP team to create new media consumption experiences. Combined User Interaction Design as well as development skills (Javascript/Node) to implement and launch multiple features including video minimization, re-designed custom video controls, tilt-to-pan, fullscreen-on-rotate and other interactive experiences (confidential until launch). Improved parts of the AMP runtime: standard actions, video manager and position observer. Participated in and led Agile (Scrum) software development cycle activities including sprint planning, code reviews and demos. Received the "Spot Bonus" (highest management bonus award)

Software Engineering Intern

DreamAfrica™, New York (Remote)

Jun 2016 - Aug 2016

Designed and built a cross-platform REST API
Maintained and optimized SQL databases.
Prototyped, designed and developed Android and iOS apps.
Integrated Facebook SDK and PaymentWall API.

ITS Web Development Team

Lafayette College

Jan 2016 - Jul 2016

Unit-tested the Lafayette.edu Wordpress theme, designed and implemented web components.
Researched accessibility techniques for Wordpress.
Researched badge integration with Moodle.

Software Engineering / UX Design

Freelance / Personal Projects

Jul 2010 - Current

Extensive experience, making creative projects (Portfolio: <http://gharbi.me/>).
Designed, developed and managed web-apps using multiple platforms and languages (PHP, Node.js, Python Django, etc)
Managed, designed and executed multiple successful projects using Java, C++ and Python (MirrorOS, Assembly Simulator, CourseChief, SliceLocator, etc.)

RESEARCH EXPERIENCE

Neural Networks Researcher

EXCEL Scholarship, Lafayette

Jun 2016 - Aug 2016

Used a novel loss function to train a Neural Network on recognizing face similarity.
Worked with Tensorflow (Python) to fine-tune a pre-trained Convolutional Neural Net.
Designed crowdsourced Amazon MTurk experiments to get training data.

Intelligent Tutor System for Calculus

Independent Research

Aug 2016 - Jan 2017

Designed and built an ITS (Intelligent Tutor System) that uses a novel tree structure to dynamically and autonomously generate drill questions for Calculus and collects data that helps professors assess student difficulties.

LEADERSHIP POSITIONS

Group President, Project Manager

Future Interactions Lab, Lafayette

Dec 2016 - May 2017

Founded Future Interactions Lab, a student-led Human-Computer Interaction group.
Lead open-source hobbyist research projects including building a prototype Smart Mirror.
Developed various HCI software (face recognition API, touch interaction with Leap Motion, ad-hoc mobile camera interface, etc.)

Resident Advisor

Lafayette College, Easton, PA

Aug 2016 - Current

Resident Advisor for MESH (Math Engineering and Science House).
Maintain an environment that fosters learning and community.
Plan events, lead meetings and solve resident conflicts.

Computer Science Tutor cs.getHelp(), Lafayette College

Sep 2016 - May 2017

Cs.getHelp() is a student-run initiative aiming to increase retention rates in Computer Science at Lafayette College where experienced Computer Science students mentor 10 to 15 students enrolled in the more challenging CS courses.

LANGUAGES

English (Full professional proficiency) • French (Native) • Arabic (Native) • German (Elementary proficiency)

SKILLS

Skills : Project Management, Software Engineering, Interaction Design and Prototyping, Graphic Design, Web Development, UI & UX Design, Computer Vision Research, HCI (Human-Computer Interaction). Proficient in Photoshop, Sketch & Principle. Electronics hobbyist, creating multiple Raspberry Pi and Arduino projects.

Languages & Frameworks : HTML, CSS, Javascript, PHP, Java, Python, Django, NumPy, Tensorflow, jQuery, SQL, C++ (Qt), R, Lua, Node.js, WordPress, LaTeX, Shell, experience with multiple APIs and SDKs (Payment, AI, Leap Motion, Kinect, etc), exposure to React.js.

AWARDS & RECOGNITION

Dean's List • Leadership Institute • AMIDEAST DKSSF Scholar • Lafayette EXCEL Scholar • Cryptography Competition Winner

OTHER WORK EXPERIENCE

Recreation Services Lafayette College , Easton, PA Dec 2015 - Current	Developed a new website for the Lafayette Leadership Institute. Designed multiple logos and posters. Managed multiple projects and social media campaigns.
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Language Resource Center Lafayette College Sep 2015 - May 2016	Managed the lab network by installing and maintaining software. Developed internal software solutions to assist professors. Tutored for Arabic, French and German.
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PROJECTS (FULL LIST ON GHARBI.ME)

ActorGenie Recognizes movie celebrities using IBM Alchemy API (Python)
MirrorOS A Unified Modular UI Platform For Smart Mirror Projctcs (NodeJS, ReactJS, Python, OpenCV)
Using Smartphones as Rotational Input Devices (Processing)
Leap Motion Touch-Screen (Processing, Leap Motion API)
Positioning camera-enabled devices on non-touch screens (Processing)
Projection Touchscreen Macbook Prototype (Processing)
Y86 Assembly Simulator (Java)
TurboGrade: Grading System for CS Labs (C++, Qt Creator)
People Counter (Processing)
CourseChief Class schedule generator for Lafayette College (PHP, HTML, CSS)
People Counter A device built for Lafayette used to count students at the gym (made using a Raspberry Pi, C++, OpenCV & OpenFrameworks)
FaceSwap Face-swapping website (using OpenCV, Python and PHP)
Face Recognition API A Django interface for OpenCV face-recognition
Slice Locator Notifies Lafayette students when there is a free pizza event nearby (ReactNative, PHP)
GoPeer A tutoring service (Startup, Lead Designer)
AlterEgo.im Anonymous Social Network (PHP, HTML, CSS)
Fribiz An affiliate based websites where users earn gifts by watching videos
Lafolio A CMS prototype built in PHP, manages student portfolios (uses badges and achievements)
CalcTutor An intelligent tutoring system for calculus courses (Django)
MTKWorld.net Phone Review Articles Written by Artificial Intelligence! (PHP, HTML, CSS)
ThatMP3.com ID3 Tagger for MP3 Libraries (PHP, HTML, CSS)

VOLUNTEERING

Volunteer Teacher in Madagascar LIME (Lafayette Initiative For Malagasy Education)	Traveled to Madagascar as part of a peer-to-peer mentoring program that aims to prepare Malagasy students for applying to US colleges. Mentor Malagasy high-school seniors during a three-week trip. Topics included SAT and TOEFL preparation, College Application assistance and personal statement proofreading and advising. The experience included course syllabus design, course material preparation and lecturing.
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CLUBS & MEMBERSHIPS

ACM Lafayette Engage in conversations about computing and society • **TEDxLafayetteCollege** Helped organize two successful conferences
International Student Association Helped organize events & design posters • **Future Interactions Lab** Various hobbyist HCI projects