Nachiketa Gargi
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Profile

High School student with a strong interest in programming and music production and composition.

Education

The Nueva School : Class of 2018
Relevant classes: Biology, Physics, Chemistry, Advanced Programming Workshop, Math 3 (Precalculus), Music Production

Projects and Accomplishments

AutoMuse - Fall 2015 - Present
10th grade "Quest" (independent study passion project) at The Nueva School. Used LSTM neural networks for music composition, and created a web interface to stream infinite generated music. Built with Python, Keras, Flask, and Numpy. Repo here.

Music Production - Ongoing
Learned to use Ableton Live and am creating many new tracks with it. Check out my splice and soundcloud.

Best Overall App at AT&T Smart City hackathon - Fall 2015
Designed and built (in a team of 3) an Android and web app to track Caltrain, using crowdsourced train position data from phones triggered by the SSIDs of Raspberry Pi-generated WiFi networks on trains to determine the train number.

Science Game Jam - Spring 2016
Participated in the 2016 Science Game Jam at the California Academy of Sciences. Designed and built a HTML5 game about managing a farm with limited water in 24 hours. Repo here.

Computer-generated music - Fall 2014 - Spring 2015
9th grade "Quest" project at The Nueva School. Uses Markov chains and to compose music based on other music. Private repo. Built with Python, tkinter, and various MIDI libraries for Python.

Harker Proco (2nd place) - Spring 2016
Won 2nd place at the Harker Programming Competition on a team of 3.

Spotify Streamer - Summer 2015 - Fall 2015
Made a Node.js app that used libspotify to add songs to a queue and stream to multiple computers, in sync. Repo here.

Built PC - Summer 2015
Built a computer: Ordered parts, assembled, installed OS. Learned about computer hardware and firmware. (in fact, I'm typing this on that computer... :0)

Emraldia (Minecraft Server) - Spring 2015
Set up a Minecraft server on a DigitalOcean droplet and built accompanying website, with live stats and ability to chat on server. Website is now down. Built with Node.js, Socket.io, HTML, CSS, Javascript (AJAX mainly)

CamsCTF - Spring 2015
15th place (out of 650+ teams) in the CamsCTF online computer security challenge.

Stanford ProCo - Spring 2015
Competed at Stanford ProCo as a member of a three-person team.

Dnnr - Spring 2015
An online web application that helps the user find a restaurant to eat at. Made with AJ Nadel at the HSHacksII hackathon and available here. Built with Node.js, Express and AngularJS.

Hyve - Spring 2015 - Present
A web application (soon to be an Android/iOS app too) that makes it easy to manage clubs at a school. Private repo but available here. Built with Node.js, MongoDB, Express and Materialize.css

Caltrain Pushbullet Notifier - Winter 2014-2015
Using the Pushbullet API, alert users when their train is 15 minutes away. Private repo. Built with Node.js and MongoDB.

Quotidian - Spring 2015
Made a Chrome Extension that displays a random quote with the functionality to read it aloud, copy it to the clipboard, and view the wikipedia page for the author of the quote. Website and available here. Built with HTML, CSS, and Javascript. All art/logos were made in Photoshop/Illustrator.

NaChat - Fall 2015
Built a PubNub-based chat client for fun. Available here.

Raspberry Pi GPIO API and Android App - Winter 2014-2015

Built a RESTful API to control GPIO pins on my Raspberry Pi. I also made an Android app using Cordova and my API that could turn an LED on and off.

Mo' Meta - Spring 2015
Singlehandedly designed and built a Chrome Extension with accompanying backend that enables users to add custom metadata to Youtube videos that any other user can see. Built with HTML, CSS, Javascript (front-end), Node.js, and MongoDB.

FRC Team - Fall 2014 - Present
Part of the FRC Robotics Team at The Nueva School. Helped with design, CAD, and build. Also made an online "scouting" web application for the team to help gather information about other teams. Source available here. Built with Node.js, Express, and MongoDB.

PicoCTF - Fall 2014
Participated in an online computer security competition, and got 73rd place.

Synopsys Science Fair winner - Spring 2013
Won 2nd place in Physics at the Synopsys Science Fair for an experiment on crystallization of supercool liquids. Paper available here.

Website for Dental Clinic - Summer 2015
Designed a website for a dental clinic. It is mostly static but also enables users to book an appointment. Built with Node.js with Express and Jade on the back-end and jQuery and Materialize.css on the front-end. Private repo.

Science Bowl - Fall 2013 - Present
Member of middle school and high school Science Bowl team. Attended the competition at the National Hispanic University (8th grade) and SLAC (9th grade).

Middle School Vice-President - 2013-2014 School Year
Was elected as Middle School vice-president.

Skills

Technical skills

Client-side/Standalone: Javascript, jQuery, Python 2 and 3(with tkinter), HTML5, CSS3, Jade, Cordova/Phonegap, Arduino, Responsive Web Design (Bootstrap, Materialize.css)

Server-side: UNIX shell, DigitalOcean, Bluemix, Heroku, Google Cloud Platform, Python (Flask), Node.js with Express, MongoDB, SSH

Tools

Advanced Proficiency in Solidworks, Adobe Creative Suite (After Effects, Photoshop, Illustrator, Premiere Pro), Logic Pro X, Final Cut Pro X, Autodesk AutoCAD, MuseScore, Ableton Live

Basic Proficiency: Maya, Android Studio, Blender, Unity

OS

Mac OS X, Linux (Ubuntu, Linux Mint, Debian, Kali Linux)

Other skills

Music

- Classical Piano: 8 years
- Jazz Clarinet: 2 Years
- Guitar: 1 year
- Music composition
- Member of The Nueva School Jazz Ensemble

Sports

- Competitive Soccer: 7 years
- Was on school basketball team
- Varsity soccer team

Other

- Basic proficiency in Spanish
- Fast learner!