Michael Hetrick

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Summary

- Lifelong musician and computer-user.
- Creates and edits film.
- Experienced with:
  - Audio:
    Pro Tools, Ableton Live, Maschine, Reaktor, Sonar, Renoise, FLStudio, Max/MSP, Adobe Audition, Reason, Numerology, Csound, Reaper, Logic, pd, Metasynth, Minim, Digital Performer. In-depth knowledge of many hardware and software synthesizers and effects.

  - Graphics/Video:
    Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Dreamweaver, Maya 2013, 3dsmax 2013, fugu, Final Cut Pro, Jitter, Processing, Meshlab, Nodebox, vvvv, TopMod

  - Programming Software:
    Xcode, Visual Studio 2010, git, Eclipse, Aptana, Subversion, Mercurial

  - Programming Languages and Libraries:
    C/C++, Java, Objective C, Lua, Processing, OpenGL, OpenGLES, OpenGLSL, GLV, *gamma*, MATLAB, PortAudio, liblo, oscpack, JUCE, LaTeX, Ruby, HTML, CSS, MySQL

- Extremely familiar with all major computing platforms. Has created applications on Windows, OSX, Linux, iOS, and Android. Has built multiple PCs.
- Very organized. Every sound and song file created is backed up on Dropbox and three separate hard drives. Code is backed up in the same way, and managed using git repositories. All code is thoroughly commented and properly formatted. Also keeps a constantly updated Evernote account.

Education

- PhD (in progress):
  2012-current:UC Santa Barbara MAT Program
  Current Projects:
  - Creating a Fractal Flame renderer in OpenGL on iOS and OS X. The iOS implementation is now available on iTunes under the name "Fractal Blender".

- Starting a company with two other students to release Reason Rack Extensions, plug-ins for the popular music software, Reason.
- Taught an undergraduate class for Clarence Barlow on writing a synthesis engine from scratch and implementing it as a VST/AudioUnit plug-in using JUCE.
- Porting an educational graphics engine by Theodore Kim to a cross-platform GUI-based JUCE version, along with an iOS-based Cinder version.
- Porting an FFT-based Audio-to-MIDI converter from Pascal to C++ (for Clarence Barlow). The software currently runs on Linux, Windows, and OS X.
- Programming cross-platform VSTs, AUs, and RTAS plug-ins based on JUCE and *gamma*.

- Masters:
  2010-2011: UC Santa Barbara MAT Program
  Concentration: Electronic Music and Sound Design
  Project: Using Chaotic Mathematics to Fill Wavetables for Oscillators
  Completed Projects:
  - Created an iOS synthesizer that uses OSC, OpenGL, and AudioUnit technologies. Sold successfully through the App Store, earning "New and Noteworthy" under the music section.
  - Part of a team project to port an advanced MIDI sequencing environment from Pascal to C++ (for Clarence Barlow).
  - Created a real-time sample-based granular synthesizer using an Arduino, pressure sensors, and Pd.
  - Taught undergraduate classes on Ableton Live, Pro Tools, Reaper, and Komplete.
  - Created an advanced set of macros to simulate an analog modular synthesizer in Max/MSP.
  - Created a surround sound, multi-operator FM synthesizer using the gamma library. The synthesizer is expandable from 1-16 channels, and can be controlled with OSC (implemented using liblo). This was written for Matt Wright, one of the architects of OSC.
  - Created two surround sound compositions (for Curtis Roads).
  - Created two CSound compositions (for Joann Kuchera-Morin).
  - Part of a team project to create software for a NeuroSky headset that tracks emotions of users interacting with art (for George Legrady).
  - Created an interactive, real-time simulation of chaotic attractors in OpenGL/GLV.
  - Created a MATLAB program that convolves audio and visual data together to create powerful results.
  - Created a composition toolkit for Renoise using Lua.

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- Undergraduate:
  2006-2010: Vanderbilt University in Nashville, TN
  Major: Digital Media and Distribution (Interdisciplinary)
    - In charge of editing, co-writing, and creating the soundtrack to a $5,000 student film, while also providing ADR. The film (*A Step Backwards/4106*) was shot in HD. Post-production only took a week, and the film won Vanderbilt's Film Festival.
    - Created an interactive installation using Max/MSP/Jitter that featured three screens receiving video from a single projector. Three other videos were shown at a gallery in downtown Nashville.
    - Hired by a professor once per semester to teach his Computer Recording class about Ableton Live and to demonstrate new technologies in interfaces and VST instruments. Also worked from time-to-time in his Nashville studio on electronic tracks.

- High School:
  2002-2003: Central Catholic High School in Canton, OH.
    - Selected for statewide Ohio Honors Band (as a percussionist). Performed in seven European countries.
  2003-2006: Western Reserve Academy in Hudson, OH.
    - Was selected as one of eight students to study abroad and represent Reserve in Caterham, England for a month at Caterham Boarding School.
    - Played guitar, bass, and drums in the school's Jazz band.
    - Principle percussionist for school's Concert band.
    - Varsity athlete. Awarded Most Improved Player.
    - Helped maintain and design the school's website.
    - Graduated with honors.
    - Hired to do a Dance-a-Thon, in which I had to DJ continuously for eight hours with only a single ten-minute break. I was also a DJ for Reserve's radio station.

- Additional:
  ACE Computer Camp
    - Learned HTML, Visual Basic, and basic C++. Began working with Macromedia (now Adobe) software.

  KOSA Drum Camp
    - Studied with top professional world drummers.

  Cleveland Bartending School
    - Licensed Professional Mixologist.
    - ServSafe verified.

Work History

- Summer 2012-Present: Owner/Founder/Developer, Unfiltered Audio
    - Designing user interfaces and programming DSP code in C++ and Lua for Reason Rack Extensions, plug-ins for the popular music software, Reason.

- Winter 2011: Teaching Assistant, UC Santa Barbara (Part-Time)
    - TA for 200B, a core class for MAT taught by Curtis Roads. Selected for aptitude with music software and ability to present complicated techniques simply.

- Fall 2011-September 2012: Research Assistant, UC Santa Barbara (Part-Time)
    - Programmer for the RoSE project. In charge of UI design and implementation using Aptana Studio, Ruby on Rails, CSS, and HTML.

- Summer 2011-Present: iOS App Developer
    - Developing apps for the iOS platform. Sole developer for two releases, DrawJong and Fractal Blender.

- Summer 2011-Present: CREATE Technical Coordinator, UC Santa Barbara (Part-Time)
    - Managing four campus recording studios. In charge of making all studio-related purchases, setting up for CREATE concerts, and making sure that everything is in top, working condition.

- Summer 2010: Bartender, Brookside Country Club, Canton, OH

- 2009-2010: C Squared Media, Nashville, TN: Soundtrack and Editing Work
    - Made soundtracks for local commercials. Turnaround was often quick. Would sometimes receive footage in the morning and have to provide a soundtrack by that evening.

- Summer 2009: Rain Management Group, Los Angeles, CA (Intern)
    - Critiqued scripts and designed a newsletter which will be published in the near-future.

- 2007-2009: Wilderness Studios in Nashville, TN (Part-Time)
    - Assisted the owner with software and hardware training. Taught him and the clients how to use samplers and synthesizers. This studio originally specialized in country music, but has since moved towards dance and pop.

- 2003-2009: Drummer for Richard Flemming (Rock band)

- Recorded my band's album on a farm over the course of a week. Despite the low budget, we sold close to 600 copies and received a rave review in Cleveland Magazine. We were also reviewed in the popular on-line music site Stylus. On top of the recording, I also did the layout and design for the packaging in In-Design and Photoshop, and mastered the album in Audition. We later toured for the album in Cleveland, New York City, Nashville, and Chicago.

- 2000-Present: Independent Electronic Musician
    - Published an article on AudioTuts about editing drum loops in Kontakt. Full link: http://audio.tutsplus.com/tutorials/instruments/advanced-drum-editing-in-kontakt/
    - Took third place in effect company Ohm Force's annual Video "Cohmpetition". Received $900 in prizes. Contestants entered from all over the world (Second place went to a former drummer for Smashing Pumpkins).
    - One of my songs appeared on Create Digital Music, one of the most popular electronic music blogs on the internet. It was featured in an article about the secrets to using FLStudio as a professional sequencer.
    - Very proficient at designing instruments in Reaktor. Two of my instruments received over 1,000 downloads, and multiple ensembles received very positive feedback by a writer for Computer Music UK.
    - I taught myself how to solder while building an Arduinome, which is a type of electronic instrument/controller based on the Monome. While building it, I also learned a great deal about circuit design and controlling processors.

Websites

http://mhetrick.github.com/
http://vimeo.com/user2659711
http://soundcloud.com/the-february-thaw