

Keiland W. Cooper

🌐 kwcooper.xyz | 🐦 @keilandwcooper | @ kwcooper@uci.edu | 📧 kwcooper

Last updated Feb 22, 2020

EDUCATION

University of California, Irvine
Neuroscience, Ph.D.

In progress

Indiana University, Bloomington
Cognitive Science B.S. *with Honors*; Neuroscience Cert.
Thesis: Cholinergic mode switching

May the fourth, 2019

EXPERIENCE

Contractor Developer / Designer

2014–Present

Hybrid app UI for a cool home automation system (AngularJS/Ionic), Switched to full stack (MongoDB/ExpressJS/AngularJS/Node.js + Ionic), Built a CRM and an inventory system in 8 months (full stack, LAMP), Developed an in-browser QR code PDF generator and QR code scanner (JavaScript), Built and deployed a sitemap with 150 million URLs (Python), Full redesign of CI for Murat Diril, produced full advertisement package (print).

Lead Designer / Web Developer

2007–2014

Developed (both frontend and backend) websites/services based on Wordpress/Contao, Built a job board (full stack, LAMP), Designed CI's, posters, flyers, catalogues, business cards etc.

Contractor Designer / Jr. Project Manager / Web Developer

2012–2014

Developed an analytics tool and a UI for a project (2000+ users as of Oct.2014).

Internship (Research)

2010

Lazer path optimization using pythagorean-hodograph curves in R^4 , Disproved given hypothesis and two of its generalized versions.

Scientific Assistant / Student Tutor / Programmer

2006–2010

Proposed an algorithm for real-time matching of filmed objects with their 3D-models, Implemented several real-time pattern recognition and triangulation algorithms, Optimized image-recognition code so that it could be used in real-time video analysis, Implemented several scheduling algorithms and a GUI for their usage (J2EE + Swing), Tutored a lecture in cryptography, corrected students homework, Voluntarily gave a sneak peak into Zero-Knowledge Proofs and PCP Proofs to the students, Also did some boring stuff: wrote TYPO3 modules.

RESEARCH

Extensive Form⁺ : Describing Games Linear Nature (Diploma Thesis, 52 pages) 2010-2011

Studied games with betting structures present in Poker. Proposed a new way to describe such structures, a strategy space and a set of equilibria on it. Proved the existence of such equilibria for finite Extensive Form⁺ games satisfying perfect recall. Submitted in 2011.

Theta modulation

Studied games with betting structures present in Poker. Proposed a new way to describe such structures, a strategy space and a set of equilibria on it. Proved the existence of such equilibria for finite Extensive Form⁺ games satisfying perfect recall. Submitted in 2011.

PUBLICATIONS

Preprints

pre, J. J. H., Cooper, K. W., and Newman, E. L. (2019). Medial entorhinal cortex activates in a traveling wave. *BioRxiv*, 632109.

Published

pub, J. J. H., Cooper, K. W., and Newman, E. L. (2019). Medial entorhinal cortex activates in a traveling wave. *BioRxiv*, 632109.

pub, J. J. H., Cooper, K. W., and Newman, E. L. (2019). Medial entorhinal cortex activates in a traveling wave. *BioRxiv*, 632109.

Abstracts

abs, J. J. H., Cooper, K. W., and Newman, E. L. (2019). Medial entorhinal cortex activates in a traveling wave. *BioRxiv*, 632109.

abs, J. J. H., Cooper, K. W., and Newman, E. L. (2019). Medial entorhinal cortex activates in a traveling wave. *BioRxiv*, 632109.

AWARDS

National Science Foundation, GRFP: emphHonorable Mention 2019

Indiana University Cognitive Science Outstanding Research Award 2018

Ewing Prize 2018

GitHub Portfolio – <https://github.com/qutebits/>

Graphical Portfolio – <http://www.coroflot.com/qutepixels/>

Languages of choice	JavaScript, Python, PHP
Stack - big stuff	Node.js/ExpressJS/AngularJS/React/d3.js, Python/PHP, MySQL/MongoDB, Git
Stack - small stuff	js/jQuery, PHP, MySQL, Wordpress/Contao
Teamwork	Git, Linux, Slack/Hipchat, Asana/Pivotal Tracker, Dropbox/Evernote/Trello/Google Docs
Design	Adobe Creative Suite

English	Fluently speaking and writing (IELTS 7.5/9.0, GMAT 730/800)
German	Fluently speaking and writing (TestDaF 17/20)
Estonian	Speaking and writing (Kesktaase 89/100)
Russian	Native language

YAML to PDF Resume Generator (Python Script) – https://github.com/qutebits/resume_42/

- Generates a small and nice PDF Resume out of YAML data,
- Main script is written in **Python**, translates **YAML** data into **T_EX** using **Jinja** templating engine.
- This whole Resume is generated with it :)

Vkontakte Playlist Downloader (Chrome Extension) – <https://github.com/qutebits/vkpd/>

- Chrome Extension for batch download of audio tracks from social network VKontakte,

PIP (Web Scraper)

- Scrapes 80+ pages of different boards/blogs/listings (HN,Reddit,Gumtree,etc.) that I visit daily,
- Sorts the scraped data and filters according to several criteria,
- Reads the filtered data with a human voice on a single click of a button using a TTS library :)

Etsy Thug (Online Tool) – https://github.com/qutebits/etsy_thug/

- Tool for quick creation of Etsy collections.

Stackin (UI Concept) – <https://github.com/qutebits/stackin/>

- Responsive UI concept for sorted value-assigned text data (like Hacker News posts).

QR codes PDF generator (JavaScript) – https://github.com/QuteBits/qr_pdf_generator

- In-browser QR codes generator which then builds and downloads a PDF with them.

QR codes Scanner (JavaScript) – https://github.com/QuteBits/qr_scanner

- Really easy to install/use,
- Runs purely in the browser (no server needed),
- HTML5 QR codes scanner which uses cameras on your devices to scan QR codes.

My Taste of Ideas (Blog Post)

- 21 personal ideas that appeal to my taste,
- Used **Markdown** for posts, **MathJax** for $\text{T}_{\text{E}}\text{X}$ snippets, **Dropbox** as storage for posts and **GitHub** as storage for images.

Hashtag Adjustor (Instagram Scraper)

- Scrapes all hashtags from 30 last posts of all the accounts that liked your posts,
- Sorts them and shows most used combinations of 1, 2 or 3 hashtags

Accounting Jobs Scraper

- Scrapes for companies in 50 industries by location and generates a CSV with their contact emails,
- Scans 5 largest UK job sites and generates a CSV and a histogram of all the salaries

Google Maps and Meetup.com Scraper

- Scrapes Meetup.com Calendar for the current day,
- Scrapes Google Maps Search results by simulating human behavior in the browser and analyzing screenshots

Executing python code on a smartphone using NFC chips and code hosted on a public fiddle

- Root your smartphone and install a command-line tool or a Linux distro,
- Write python code and save it as text on a public feedle (use hackmd.io or similar)
- save a small bash script that downloads the code from hackmd.io and executes it on an NFC chip,

Browser CCTV Streaming (JavaScript/PHP)

- Allows you to stream any number smartphone/laptop cameras (no install needed),
- Open page A in your smartphone/laptop browser and allow access to the device camera,
- page B shows all current streams from page A

Automatic Diary (JavaScript/PHP)

- Generates a static diary that shows a diary entry and all photos with a similar date from a folder

WHO AM I?

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