

# Isaac David Reyes González

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Computer engineer and MSc in neurobiology based in Madison, USA. My interests span theoretical and cognitive neuroscience, with a focus on fundamental consciousness research.

## Professional experience

- (Apr 2022 - Apr 2023) **Honorary visiting associate**  
[Center for Sleep and Consciousness](#), Department of Psychiatry, University of Wisconsin-Madison
- (Mar 2022 - Jun 2024) **GNU+Linux support engineer II**  
[Rackspace México](#)
- (Mar 2021 - Jan 2022) **GNU+Linux system administrator**  
[Neubox](#), the biggest web hosting provider and domain registrar in Mexico
- (Jun 2021-Jul 2021) **Teaching Assistant**  
[Neuromatch Academy](#), an online summer school for computational neuroscience
- (Jun 2020 - Jul 2020) **Teaching Assistant**  
[Neuromatch Academy](#), an online summer school for computational neuroscience
- (Mar 2016 - Mar 2017) **Research Assistant**  
[Center for Research in Geography and Geomatics](#)
- (Jan 2016 - Mar 2016) **IT Security Engineer**  
[Softtek](#)

## Education

- (Sep 2023 - present) PhD in Neuroscience  
[University of Wisconsin - Madison](#)
- (Aug 2018 - Apr 2021) Master of Science, Neurobiology (with honors)  
[National Autonomous University of Mexico \(UNAM\)](#)  
  
Thesis (in Spanish): *Estudio de los correlatos neurales de la percepción emocional por análisis de patrones en multitud de voxels*  
  
Supervisor: Dr. Fernando Barrios
- (Jan 2018 - unfinished) Master of Science, Cognitive Science  
[Autonomous University of the State of Morels](#)
- (Aug 2011 - Dec 2015) Bachelor of Engineering, Computer Engineering  
[Autonomous University of Aguascalientes](#)
- (Aug 2008 - Jun 2011) High school diploma (*with honors*)  
[Monterrey Institute of Technology and Higher Education \(ITESM\)](#)
- (Aug 2005 - Jun 2008) Middle school diploma (*with honors*)  
[Escuela Secundaria Técnica No. 1, “Prof. José Reyes Martínez”](#)

## Courses

A list with all university-level courses I have taken is available [here](#).

## Conferences and schools

- (2022 ) [Neuroscience School of Advanced Studies. Extended Advanced Course on Consciousness](#). Venice, Italy.
- (2020, 2021) [Neuromatch Academy](#): An online school for Computational Neuroscience
- (2020 ) [Organization for Human Brain Mapping, Annual Meeting](#).

- (2019 ) XXI Reunión de neuroimagen. Guanajuato, Mexico.
- (2018 ) XX Reunión de neuroimagen. Guanajuato, Mexico.

## Publications

- (2022 ) Larissa Albantakis, et al. *Integrated information theory (IIT) 4.0: Formulating the properties of phenomenal existence in physical terms*. PLOS Computational Biology.
- (2022 ) Bernard Hart, et al. *Neuromatch Academy: a 3-week, online summer school in computational neuroscience*. Journal of Open Source Education
- (2021 ) Isaac David, Fernando Barrios. *Localizing Brain Function Based on Full Multivariate Activity Patterns: The Case of Visual Perception and Emotion Decoding* (preprint)
- (2021 ) Isaac David. *Estudio de los correlatos neurales de la percepción emocional por análisis de patrones en multitud de voxels* (master's thesis). Universidad Nacional Autónoma de México
- (2016 ) Isaac David, Oscar Siordia, Daniela Moctezuma. *Features combination for the detection of malicious Twitter accounts*. IEEE Xplore

## Conference presentations

- (2020 ) Isaac David, Fernando Barrios. *Neural correlates of emotional perception by Multi-Voxel Pattern Analysis*. Organization for Human Brain Mapping, Annual Meeting.
- (2019 ) Isaac David, Federica Sassi, Fernando Barrios. *Neural correlates of emotional perception by Multi-Voxel Pattern Analysis*. XXI Reunión de neuroimagen. Guanajuato, Mexico.

## Skills

### Languages

- Spanish (Castilian), native
- English, proficient (C1 or above):

- (2019 ) TOEFL iBT, 111/120
- (2011 ) TOEIC, 920/990
- French, intermediate

## Neuroimaging equipment and protocols

Under the supervision of technicians and professors, I have co-collected behavioral, fMRI (task and resting-state), T1-weighted and T2-weighted data from tens of healthy adult subjects in a 3-Tesla General Electric Discovery MR750 magnetic resonance scanner.

Similarly, I have participated in tens of neuroimaging study protocols (including diffusion-weighted studies and all sorts of psychological tasks), using both the aforementioned scanner and a 3-T Philips Achieva TX system.

## Computer skills

- **Certifications:**
  - (2023 - lifetime) Python Institute. *Certified Associate in Python Programming (PCAP 31-0x)*
- **Languages:**
  - Advanced: R, {,ba}sh, Python, Make, Markdown
  - Intermediate: sed, awk, TeX, SQL, HTML, CSS, javascript, C, Java
  - Basic: C++, Matlab, Emacs Lisp, PHP
- **ML libraries and frameworks:** NumPy, Scikit-learn, pyMVPA, PyTorch
- **Neuroimaging software:** FSL, pyMVPA, FreeSurfer, MRtrix, XNAT
- **Psychophysics software:** PsychoPy
- **Operating systems:** GNU+Linux and Unix-like operating systems, over 12 years of daily and professional experience (Arch-based systems, Debian/Ubuntu, Fedora/RedHat/CentOS, CloudLinux)
- **Init systems:** systemd, sysV, openRC

- **Network services:** HTTP/S (Nginx, Apache, Cherokee, Lighttpd), SMTP (Postfix, Exim), IMAP/POP (Dovecot), SSH (OpenSSH), rsync, DNS, tcpdump
- **Database servers:** MariaDB/MySQL, PostgreSQL, MongoDB
- **Monitoring:** NagiosXI, Nimbus
- **Provisioning (infrastructure-as-code):** ansible
- **Big Data:** MapReduce/Hadoop
- **Virtualization:** KVM/qEMU, proxmox, vmWare, VirtualBox
- **Containers:** chroot, docker, singularity
- **Shared hosting:** CloudLinux, cPanel, DirectAdmin
- **Filesystems:** ext{3,4}, btrfs (ZFS-like), xfs, NFS
- **Version control systems:** Fossil, Git
- **Cryptography:** PGP ([GPG key](#) or fingerprint 38D33EF29A7691134357648733466E12EC7BA943), OpenSSL
- **Bootloaders:** GRUB 2, uboot
- **Software engineering methodologies:** Kanban, Scrum

## Awards

- (2021 ) National Autonomous University of Mexico, *Alfonso Caso Medal* (announced).
- (2015 ) National Center for the Evaluation of Higher Education (CENEVAL), *National Bachelor's Degree Graduation Exam (EGEL). Outstanding performance diploma.*
- (2010) Monterrey Institute of Technology and Higher Education, *II Alfonso Reyes Contest for Graphic Creation. 2nd best cartoon.*
- (2007, 2008, 2010) Mexican Mathematical Olympiad, *State Finals. 1st prize* (shared).
- (2009 ) Mexican Olympiad in Informatics, *State Finals. 1st prize* (shared).
- (2008 ) Ministry of Education of Aguascalientes (IEA), *Aguascalientes Educational Excellence Award (PREXEA).*

- (2008 ) National Center for the Evaluation of Higher Education (CENEVAL), *National Higher Education Entry Exam (EXANI-I)*. 2nd best score at the State level.
- (2007 ) Presidency of Mexico. *Award for Academic Achievement* (multiple recipients).
- (2005 ) Secretary of Education (Mexico), *Children's Olympiad of Knowledge*. School district 1st prize.

## Scholarships and Fellowships

- (2024 - 2028) National Council of Humanities, Sciences, and Technologies (CONAHCYT). Fellowship for international postgraduate studies.
- (2022 ) Neuroscience School of Advanced Studies, Italy. *Extended Advanced Course on Consciousness*. Student scholarship.
- (2008 - 2011) Monterrey Institute of Technology and Higher Education. *Prepa Tec scholarship at 80%*.

## Memberships

- (2023 - present) [The Document Foundation \(Libreoffice\)](#)
- (2023 - present) [GNOME Foundation](#)
- (2022 - present) [Association for the Scientific Study of Consciousness](#)
- (2020 - 2022) [Organization for Human Brain Mapping](#)
- (2016 - present) [Free Software Foundation](#)
- (2013 - 2015) Jazz Big Band, Autonomous University of Aguascalientes
- (2012 - 2016) Ensamble Real de Jóvenes Universitarios (youth orchestra), Autonomous University of Aguascalientes

## Amusement

- I am an amateur pianist with a taste for all sorts of art music, jazz and some rock and latin music and general folk music (some recorded performances [here](#), [here](#) and on [my website](#)).

- I used to devote much of my spare time to drawing and painting. The appetite has vanished in recent years though. Works also available on my website.

## Volunteering

- I was a volunteer for the Free (i.e. Libre) Software community, more prominently for [Parabola](#), a variant (also known as distro) of the GNU+Linux operating system. There as an official hacker from 2015 to 2018 I [co-founded the ARMv7 port](#), [rescued the i686 port from abandonment](#), [maintained packages up-to-date](#), helped [improve some of the development tools](#) and server infrastructure; among various things.
- I have been editing Wikipedia steadily [since 2011](#). The motivation for producing unrestricted culture and educational material is analogous to my advocacy for libre software.