[](https://photos.app.goo.gl/BiLG4x3iEUxUMguc8)

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| [home](https://arnoklein.info/index.html) | [cv](https://arnoklein.info/cv.html) | [mind](https://arnoklein.info/mind.html) | [brain](https://arnoklein.info/brain.html) | [design](https://arnoklein.info/design.html) |

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| @rno klein  binarybottle [at] proton.me  arno.klein [at] childmind.org  (347) 577 - 2091  [Google Scholar](https://scholar.google.com/citations?user=R5i2QZAAAAAJ&hl=en&oi=ao)  [Orcid](https://orcid.org/0000-0002-0707-2889)  [OSF](https://osf.io/kj7sv/) | I currently direct the [MATTER Lab](http://matter.childmind.org) at the [Child Mind Institute](http://childmind.org) to build and deploy mind-assisting technologies for use in therapy, education, and research. I am fascinated by phenomenology, and have built open-source tools to conduct experiential sampling / ecological momentary assessments, and to collect cognitive, behavior, and physiology data.  I am a passionate proponent of open science, where researchers share data, code, resources and ideas, and where collective, collaborative endeavors are preferred over separate silos of independent research. To vastly scale up open research, I have been heavily engaged in mobile health research projects. Examples include the [mPower](https://parkinsonmpower.org/) app for tracking symptom severity in Parkinson patients, and more recently as the creator of platforms such as [Curious](https://www.gettingcurious.com/), Mosaic, and LinguaLearn.  I am also driven to solve difficult conceptual and design challenges, including optimal keyboard layouts for different languages, lexical ontologies to interrelate different domains, taxonomies of graphical elements, optimal font design for the visually impaired, and morphing speech/semantics. |
|  | Project highlights |
| A screenshot of a computer  AI-generated content may be incorrect. | **Monitor experience and cognition using a platform to build *your own*****data collection, assessment, and intervention mobile/web apps**  I created Curious ([gettingcurious.com](https://www.gettingcurious.com/), formerly “MindLogger”) to enable anyone anywhere to create their own mobile/web applications for conducting end-to-end encrypted, remote data collection, assessments, cognitive tasks, and interventions. It is easy to use and rich with features (survey tools, audio/video recordings, drawing, geolocation, specialized millisecond-precision cognitive tasks, etc.). My primary use is for (1) ecological momentary assessments, to know what people are thinking, feeling, and how they are behaving in their daily lives, and (2) collecting performance task data in Curious alongside sensor data (EEG, EMG, electrodermal, movement, heart rate, eye tracking, pupillometry, etc.). The project has received over $10 million in funding from the State of California, NIH, MIT, Paris LPI, and Hearst, Stavros Niarchos, and Hirani foundations. |
|  | **GenAI-powered language tools for research and interventions**  *LinguaLearn*is a set of tools under development that uses deep learning models, sound morphing, LLM-based word games, and real-time visual feedback to help people improve their pronunciation and verbal fluency.  *MediaMentor* is a new project that will use an LLM to help families grapple with concerning video content by introducing an interactive avatar that detects and discusses this content with the viewer.  *Mosaic* is a database and recommendation system that will use LLMs, expert source content, and template guides to generate personalized mental health guides for use by patients, parents, educators, and clinicians. |
|  | [**Mindboggle brain image morphometry/analysis software**](http://mindboggle.info)  I created Mindboggle ([mindboggle.info](http://mindboggle.info)) open-source software for the analysis (feature extraction, labeling, and morphometry) of human brain imaging data. The project has been funded by three NIH grants, is under active development, and is maintained by the Computational Neuroimaging Lab at the Child Mind Institute. |
|  | [**Optimal keyboard layouts**](https://engram.dev)  I algorithmically design keyboard layouts optimized for different languages  (early example: [engram.dev](https://engram.dev)). I currently use a Bayesian preference learning model to convert crowdsourced typing preference data into estimates of typing comfort. |
|  | [**Cave temple photodocumentation**](http://elloracaves.org)  My wife and I created the first comprehensive photodocumentation of the Buddhist, Hindu, and Jain cave temples of Ellora in India, with a database of over 7,000 photographs referenced against ground plans ([elloracaves.org](http://elloracaves.org)). This work was partly funded by grants from the Mellon Foundation and the Indian government. Mapin and Columbia University Press will publish our book by the end of 2025. |
|  | [**Ellora daily photo time-lapse**](https://ellora.org/)  I took a photograph of my daughter's face every day up until she entered college (now much more sporadically), and use facial features to coregister the images to create a time-lapse animation of her entire life. You can see the first five years on [ellora.org](https://ellora.org/). This project has been showcased in articles in the L.A. Times and Slate Magazine and has aired on Japan's NHK and Germany's DW-TV. |
|  | [**Halloween gallery**](https://photos.app.goo.gl/BiLG4x3iEUxUMguc8)  Once a year I take out a little time to create a different identity. Most of these costumes don't last long, as they usually follow an edible theme. |
|  | **Family websites**  [KAKlein.com](https://www.kaklein.com/) — My mother is an artist; see her blog and online portfolio of drawings, paintings, and natural historically-inspired cabinets of wonder.  [KorinthianViolins.com](https://www.korinthianviolins.com/) — My sister is a luthier with a violin store; she builds, repairs, teaches, and writes [novels](https://www.korinthiaklein.com/).  [Pupating.org](https://www.pupating.org/) — My identical twin brother is a professor at University of Wisconsin La Crosse and focuses on behavioral ecology, entomology, and art. |