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As an engineer I feel that I have a civic responsibility to use my skill set to hold powerful institutions accountable when they encroach on civil liberties. For the last five years I have gravitated towards political projects that I believed would have real impact - this is why I am eager to work with The Markup.

I have experience both investigating technology as well as using technology for investigations and I find that I do my best work when I am collaborating with seasoned researchers who can use the data I gather or analyze to push their work in a direction it otherwise might not have gone.

For the last year I have been collaborating with Kashmir Hill at Gizmodo on narrative stories concerning the role of technology on society. I assisted Surya with his story about metadata and IoT, and am now working on a similar piece about AWS. Through this work I have built creative applications to gather and analyze data and have pushed myself to clearly articulate complex technical subjects for non-technical audiences.

I have also worked on less narrative and more data driven investigations. Most recently I collaborated with Ryan Felton at Jalopnik to parse and analyse a massive NHTSA database in order to identify deadly car accidents due to a faulty Goodyear tire. As an Artist in Residence at Eyebeam, I also undertook on a years long investigation into Google Earth, Satellite Imagery Updates, and Censorship, that was recently published in Motherboard.

Before I was collaborating with journalists I was working with lawyers and activists and using computers to assist in their work. As a researcher and intern for the ACLU, I learned how to interrogate technology and to examine public data to identify threats to civil liberties - from digging through mobile operating systems to understand what Border Patrol might have seen on seized device, to scraping volumes of public records to single out abuse by a specific company. My work at the ACLU taught me to be rigorous and skeptical, and to always consult with experts.

Through these data driven projects the most valuable insights I have picked up are the necessity of making reproducible research central to any investigation, and the value of automating as much as possible. Tools like Docker are invaluable when creating code that scales and can be built on any system. Working in the open with Python Notebooks make it simple to have experts independently verify your work. Basic scheduling mechanisms like cron jobs are simple and effective to automate data collection. And writing out clear log files and commenting your code saves hours of time when you are working on multiple projects.

Because each investigation is different, I have accumulated experience with a variety of technology that, I believe, could contribute to The Markup's success. From using Software Defined Radios to investigate signals to building containerized software tools for reproducing research with Docker, I enjoy finding the right technology for a given project. I have also built enterprise software with Node, Python, and Ruby and have experience Postgres, Neo4j, and unstructured databases.

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