

# Canaan McKenzie

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## Technical skills

- Data pipeline development (Python, Spark)
- Data analytics (Python)
- Interactive web application development (C#/.NET)
- Database management (PostgreSQL)
- Programming in C/C++, C#/.NET, JavaScript, Elixir
- Experience with AWS & Azure
- Deploying software with Docker
- Web design & desktop publishing

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## Experience

### Data analysis and Software Contractor, Bugcrowd

Jan 2021 –

present

- Provide data science contract services in data security and access rights to Bugcrowd clients
- Develop and maintain web applications and security auditing documentation specializing in C#/.NET applications.

### Scientist I, Vaxcyte

Aug 2020 – Jan

2021

- Worked as a research scientist investigating the use of industrial robotics in high throughput analysis of compound vaccine candidates
- Created a generalized framework for cataloguing and retrieving data on degradation of novel polymer compounds within varying buffer solutions across teams in the United States and Europe
- Wrote standard operating procedures for pre-clinical trials validated by cGMP quality assurance auditors for companywide manufacturing

### Analytical Chemist, Pacific Biolabs

Jan 2019 – Aug

2020

- Responsible for creation, validation, and execution of experiments under cGMP and GLP guidelines
- High Performance Liquid Chromatography (HPLC), Enzyme-Linked immunosorbent assays (ELISA), Western/Southern blot, Gas chromatography-mass spectrometry (GC-MS)) as needed for long-term entries into large data sets
- Maintained fault-tolerant databases to avoid data loss/system failure in critical infrastructure

### Research Assistant at The Engineered Biomaterials Research Lab, The University of Vermont

Dec 2014 – Feb

2018

- Designed and built software/hardware for a 3D polymer extrusion system for translating CAD models into complex stem cell scaffolding
- Wrote embedded software to control a multi-axis movement system under strict biologically inert conditions
- Presented research in URC conference posters (2015,2016) and SFB conference posters (2017)

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## Education

### Bachelor of Science in Mechanical Engineering, Minor in Computer Science

2012-2017

The University of Vermont

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## Publications

- Patrick Nelson Charron, Sarah E. Blatt, [Canaan McKenzie](#), Rachael Oldinski (2017). Dynamic mechanical response of polyvinyl alcohol-gelatin theta-gels for nucleus pulposus tissue replacement. *Biointerphases* 12(2). DOI: 10.1116/1.4982643
- Tianxin Miao, Emily Julia Miller, [Canaan McKenzie](#), Rachael Oldinski (2015). Physically crosslinked polyvinyl alcohol and gelatin interpenetrating polymer network theta-gels for cartilage regeneration. *Journal of Materials Chemistry B*. DOI: 10.1039/C5TB00989H