Beth Crane

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About

Beth Crane is a Staff Software Engineer at Flatiron Health, where she works to make clinical trials more scalable and accessible. Prior to Flatiron, Beth worked on the Microsoft HoloLens, designing novel interaction mechanisms for AR/VR that felt grounded in real-world physics.

After graduating from the University of New South Wales over a decade ago, Beth has been making her way farther east — first Seattle, now Brooklyn. She's happiest when refactoring legacy codebases and finding elegant solutions to complex problems. Beth is passionate about building engineering cultures where people are encouraged to be thoughtful developer citizens, finding ways to improve the dev ecosystem through their everyday tickets.

When she's not optimizing systems or mentoring teammates, you can find Beth taking photographs, riding an electric CitiBike across the Williamsburg bridge, or chipping away at whatever her latest project is.

Technical Skills

Programming Languages

- C#, Go, Python
- React, TypeScript, Node.js
- HTML, CSS, JavaScript
- VB, Java, C++
- AI-assisted development (Cursor, Claude, Junie)

Technologies & Tools

- AR/VR Development, Unity 3D
- AWS: DynamoDB, S3, SQS, Lambda, API Gateway, EKS
- SQL Server, PostgreSQL
- Splunk, DataDog
- Terraform, Docker, Kubernetes (k8s)

Other Skills

- Self-directed work • Cross-functional collaboration
- Customer-led development • System architecture

Education

University of New South Wales

BSc Computer Science (Linguistics Minor)

2011 – 2014

Employment

Staff Software Engineer

Flatiron Health • 2021 – Present

Clinical Pipe (Go, Node.js, TypeScript, AWS stack)

EHR → EDC tool for oncology clinical trials

- Migrated Clinical Pipe from DynamoDB to PostgreSQL with zero downtime – 14M production and 48M non-prod records, with >1M live comparisons validating data equivalence
- Developed mechanisms for upleveling technical standards across the organization (e.g. decision making frameworks, accelerated design reviews)

Clinical Pipe Product Page → (backup)

Precision Medicine (C#, JS/React, AWS stack)

System for ordering genomic tests and standardizing results across multiple labs

- Partnered with external labs to develop and integrate APIs for medical professionals to order NGS tests for their patients, streamlining physician workflows (backup)
- Engineering lead for the Lab Agnostic Molecular Profiling project
- Processed over 10k reports from our first external lab (backup) in the first year, surfacing them to OncoTrials for trial matching
- System has since grown to support over 100k reports across 3+ labs

Precision Medicine Product Overview → (backup)

Senior Software Engineer

Flatiron Health • 2019 – 2021

Practice Management (C#, VB, JS/React, SQL Server)

Financial tools to keep community oncology clinics afloat and focused on patient care

- Engineering lead for upgrading OncoBilling's claim scrubbing – I handled fact-finding, making the decision to work with an external vendor instead of building in-house, technical design, and development + rollout
- This project resulted in practices seeing a ~25% reduction in First-Pass Denials for submitted claims

Software Engineer I & II

Microsoft • 2014 – 2019

Mixed Reality at Work (Unity/C#)

Enterprise AR application for spatial design and collaboration

- Joined a team with a prototype – built it into a shipped enterprise application
- Collaborated with designers to create novel interaction mechanisms for AR/VR (grounded in reality, but free from physical constraints), including best-in-class menu UX

Microsoft Layout Product Page →

HoloLens Developer Platform (C++, C#, JavaScript)

Developer tools and telemetry infrastructure for Mixed Reality headset

- Created end-to-end telemetry instrumentation + reports for health of HoloLens developer platform
- Built the Windows Device Portal file browser

- Taught developers how to build for HoloLens & Windows Mixed Reality at //Build conferences and HoloLens hackathons
- Partnered with recruiting team on multiple domestic/international hiring events, giving technical talks and interview workshops

Windows Device Portal Documentation →

Software Engineering Intern

Microsoft • 2013 – 2014

Untangled & polished Xbox speech API for external developers

Software Engineering Intern

Google • 2012 – 2013

Improved security testing systems on Chrome

Web Developer

Sunshack Cider • 2011 – 2012

Developed an ecommerce website

Tutor, Computer Science

UNSW • 2010 – 2014

Led coursework tutorials for university students

Awards & Recognition

Flatiron Health

- Code Deletion Award (4x) (2020 – 2023)
- Winning project @ internal hackathon (2021, 2022)
- Values Award – Know when to startup and when to scale (2021)

UNSW

- Engineering Dean's Honor List (2012, 2014)
- 4th in postgrad Machine Learning course (2012)

Leadership

Flatiron Health

- Tech Mentorship program lead (2022 – Present)
- Co-lead of Environmental ERG (carbon offsets and community engagement) (2023 – 2024)

  Check out Flatiron's Environmental Impact Story → (backup)
- Refreshed and led Developer Citizenship class for new hires (2022 – 2024)
- Mentor (various – apprentices, new hires, junior SWEs) (2021 – 2025)

University

- President, UNSW Computer Science Society (2013)
- Student Representative, UNSW student council, Faculty of Engineering, School of Computer Science (2011–2013)
- Captain, UNSW Quidditch Team (2012)

Projects

How the Light Gets In

Photopoetry Book • 2024

Collaborative photopoetry book with Tallen Gabriel

Fibonacci Sequins

Style Blog • 2015 – 2022

A personal style blog that showcases and celebrates unique individuals in STEM

View Project →

Foodbank Translator

Python, Kivy, Microsoft APIs • 2018

Enables Pike Market Foodbank to show recipients the food that they're receiving, with translation from Microsoft APIs

View Project →

A Small Solution

Java (Android) • 2014

48-hour prize-winning hackathon app around cashless payments

View Project →

RoboCup SPL Research

Python • 2013

Extending real-time strategy of soccer-playing robots

View Project →

Q-Learning Traffic Lights

Java • 2012

Group Machine Learning project utilizing Q-Learning to teach traffic lights how to achieve optimal traffic flow

View Project →

Interests

- Photography
- Organizational psychology
- Tree identification

Volunteering

Garden Volunteer

Ridgewood Community Garden • 2023 – Present

Homework Help Volunteer

Brooklyn Public Library • 2023 – Present

Fellowship Tutor

Code Nation • 2022 – 2023

Morning Volunteer

Roots Young Adult Shelter • 2017 – 2019

Docent

Volunteer Park Conservatory • 2018 – 2019

President

Seattle Effective Altruism • 2016 – 2018