

Experience

- NOW** **Researcher and Digital Product Developer** - Computer Science, Newcastle University
 10/17 Doctoral researcher on novel family-focused interfaces for internet-connected services. *I started at Northumbria (2017) and transferred with the job to Newcastle (2019).*
- Designed [Domestic Widgets](#), a 'physicalisation' IoT toolkit for families to create cardboard-based indicators that connect with various data sources through voice control.
 - Implemented natural language processing, embedded hardware and bespoke web services for secure data management and access by Domestic Widget users through the voice UI.
 - Developed a Google App Script ([Phone Grown](#)), which transforms a Google Sheet into a user interface to create rule-based ambient information displays from 'left-over' phones.
 - Designed an accompanying UI in Google Sheets and written [tutorial](#) supporting a do-it-yourself, scalable and open-source dissemination of this app.
 - Deployed both products at 5-10 families each for ~2 months; individually conducted observations and interviews to qualitatively study how domestic connected devices can be better designed with families in mind, and for which potential shared purposes.
- 09/20 **Computer Science Teaching Assistant** - School of Computing, Newcastle University
 02/18 Teaching (demonstrating) in MSc courses such as Advanced Programming, Information Systems (Interaction Design and Databases), Programming and Data Structures, Object-Oriented Programming (BSc course at Northumbria University).
- 12/16 **Visiting Researcher** - Edinburgh Napier University, UK
 9/16 Designed and developed an Android AR app for [SmoothMoves](#) - a head-gesture interaction technique. This app was later ported (not by me) to Microsoft HoloLens, whilst I ported it to a standalone smartwach app ([WaveTrace](#)).
- 02/18 **Motion Graphics Designer** - Studio David Verweij, Eindhoven
 03/15 Animated and designed various motion graphics and illustrations for clients such as Smart-Homes.nl, Eindhoven University of Technology (SkillsLab, School of Education) and Media Markt NL.
- 08/16 **Co-owner and STEM Course developer** - BétaBoomen, Eindhoven, NL
 05/14
- Developed extra-curricular STEM courses (e.g. electronics, programming) for, and managed relations with, pre-university schools.
 - Delivered, and recruited other university students to deliver, these courses at pre-university schools throughout the region.

Skills

Software Development - Full stack developer, main experience in JavaScript and serverless APIs.

- Experienced in programming languages such as HTML, (S)CSS, JavaScript, TypeScript, Node.js, Java (inc. for Android and Android Wear), C++ (hardware), Python, SQL and *currently following courses on Vue.js, React.js and Docker*.
- Continuously worked with Cloud Computing solutions - primarily using the Google Cloud Platform (GCP, e.g. Cloud Functions, DialogFlow, Firebase/store, Authentication), including RESTful APIs, utilising (no)SQL databases and ensuring data security through rules and authentication.
- Balanced development skillset across the full stack, with a sound understanding and experience in
 - data structures (e.g. OOP) and design patterns (e.g. async concurrency, pub/sub messaging, queues),
 - source and version control (git) and (unit)tests (e.g. pytest, nox),
 - utilizing and building upon third-party libraries and package managers (e.g. npm, poetry, pyenv),
 - conducting data analysis and visualisation in Python (e.g. pandas, numpy, plotly) and JavaScript (e.g. D3.js)
 This includes familiarity with containerisation (Docker) and an eagerness to gain more experience in continuous integration and deployment (CI/CD).

(Product) Design - Generalist, from paper to functional prototype.

- UI/UX design, originating from illustrations and motion graphics. Comfortably navigates the Adobe Suite, including Adobe XD, Illustrator and Photoshop. Applied UX design skills through the development of various visual (screen-based), audible (voice assistant) and physical (gestural) interfaces.
- Product development, shaping form through paper prototyping, cardboard modelling, 3D printing and woodworking. Creating function through off-the-shelf electronics (Arduino/Raspberry PI) and bespoke hardware (circuit design).

Research and Analysis - Applied researcher experienced in Research through Design

Literature and user research for qualitative (e.g. thematic), quantitative and data analysis. Experienced in tools such as SPSS, NVivo, and utilising Python scripts (D3.js, pandas, plotly) for data analysis.

Communication and Collaboration - Languages: Dutch (native), English (C2: mastery)

Experienced presenter and writer for academic (see also [publications](#)), technical, public and informal purposes. I am self-directed and resourceful, yet not afraid to ask for help and collaborate.

Selected Projects

- 2020 **Phone Grown** - A Google Sheets extension providing a rule-based UI for phone-based ambient data visualisation displays.
Tools: REST API (Google App Script / JavaScript), Firestore (noSQL) database, notification service, HTML, (S)CSS
- 2020 **csv2docx** - A Python CLI+library to generate .docx files from .csv files using a .docx template with mailmerge fields
Tools: Python (type annotated), command line interface (click), package manager (poetry), (unit)testing (pytest, nox).
- 2018 **Domestic Widgets** - A toolkit to create, customise and control physical data visualisations through a voice-assistant.
Tools: Natural language processing (Google Dialogflow), Firestore (noSQL) database, REST API (node.js, JavaScript), Wi-Fi enabled embedded hardware (C++).
- 2017 **WaveTrace** - A smartwatch-based gestural interaction technique to control smart appliances through correlating wrist movements
Tools: Android Wear (Java), motion sensing (IMU), local web server (threading, Java, Raspberry PI), UDP.

[See more projects](#)

Education

- NOW
10/17 **PhD in Human-Computer Interaction** - School of Computing, Newcastle University
Thesis on Family-focused design for data-driven products.
Initially at Northumbria University (10/17 - 07/19)
- 07/17
09/15 **MSc in Industrial Design** - Eindhoven University of Technology
Graduated with distinction
- 07/15
09/10 **BSc in Industrial Design** - Eindhoven University of Technology
- 02/15
02/14 **Minor Science Education and Communication** - Eindhoven School of Education
Received a qualification for teaching secondary education physics

Management and Volunteering

- NOW
2018 **Web Co-chair** - ACM SIGCHI CHI Steering Committee
- 07/20
10/18 **Assistant to the General Conference Chairs & Design Chair** - ACM SIGCHI CHI Conference 2020, Hawaii, USA
- 2019
2018 **Design Chair** - ACM SIGCHI CHIPLAY Conference, Spain
- 11/13
09/12 **Vice-Chairman & Commissioner of Education** - Study Association Industrial Design, Eindhoven, NL
Full-time representation of Industrial Design students in multiple bodies throughout the University.