**Definition - search the articles with “defin\*” and “concept\*” to record instances of definitions of civic tech**

**Theory - search the articles with “theory” to record mentions of theories**

**C1/Civic issues: Main topics - topics are the problem domains in which the paper wants to contribute to**

\*Section: Title, Abstract (sub-codes listed are only some examples)

1. Public service and governance - governance, administration, policy making, civic duties

2. Urban planning - placemaking

3. Environment - sustainability, preservation, climate change, rising seawater

4. Education - literacy, learning, MOOCs

5. Crime and safety - healthcare, domestic violence, security

6. Accessibility and minority - equality/inclusion, prejudice, research justice, social justice

7. News and journalism - filter bubble, information operations, information seeking, citizen journalism

8. Disasters - critical infrastructure, fire risk, pipe breaks, emergency, war

9. Neighborhood/local issues - community challenges, crowdfunding, community support

10. Democracy and participation - activism, engagement, participation, civic advocacy, deliberation, transparency, reflection, trust, citizen decision-making

11. Engagement - community/civic/citizen/situated engagement

0. N/A - no clear contribution area (e.g., AID 254, tech lit without application)

99. Others

**U1/Stakeholder (A): Ideal Users - Who Are Serving the Roles? Users**

\* Section: Abstract, Introduction

\* Priority (all)

1. activists/advocates {activist, advocate}

2. volunteers {volunteer}

3. children/youths/adolescents {child, youth, adolescent}

4. disadvantaged groups

5. administrators/government employees

6. professional/occupational groups

7. community members {communit}

8. organisational members {organisation, organization}

9. general people

0. N/A

99. Others

**U2/Stakeholder (B): Ideal Users**

\* Section: Abstract, Introduction

1. Virtual

2. Physical

3. Both → two separate groups of both virtual and physical users

0. N/A

**M1/Methodology: Overall research methods used (high-level)**

\* Section: Abstract, Methodology

1. quantitative

2. qualitative

3. mixed methods

0. N/A

**M2/Data collection method: Main research methods used for data collection (details)**

\* Section: Abstract, Methodology

1. interview {interview}

2. survey {survey, questionnaire}

3. observation {observation}

4. data logging → such as from IoT devices or app

5. web scraping {scrap, crawl, dataset, API}

6. experiment {experiment, lab stud, laboratory}

7. focus group {focus group}

8. case study {case stud, case example}

9. workshop {workshop}

10. review and reflection {review, survey}

0. N/A

99. others

**M3/Data source: Where the data is collected from**

\* Section: Abstract, Methodology

\* Priority (3 and after)

1. literature

2. people

3. hardware

4. dataset

5. device

0. N/A

99. Others

**M4/Data analysis method: Research methods used for data analysis (details)**

\* Section: Abstract, Methodology

1. thematic analysis {thematic analysis, theme}

2. content analysis {content analysis, code, coding}

3. modelling and simulation {model, simulat, algorithm}

4. inferential statistics

5. descriptive statistics

0. N/A

99. others {analysis}

**P1/Study location (A): Study Context**

\* Section: Abstract, Methodology

1. USA

2. All America (exclude USA)

3. UK

4. Continental Europe

5. Asia

6. Africa

7. Australia and New Zealand

8. Global

0. N/A

**P2/Study location (B): Data at least partially from Online?**

\* Section: Abstract, Methodology

1. Online

2. Offline

**T1/Type of civic tech (A): Type of tech that is the target of the research (high-level)**

\* Section: Abstract, Methodology

1. tailor-made tech → tech explicitly modified

2. existing platform → tech commercially available

3. hybrid → includes tailor-made tech and existing platform separately

0. N/A

**T2/Type of civic tech (B): Form of the tech in T1**

\* Section: Abstract, Methodology, Discussion

1. social networks or forums {social media, social network}

2. algorithm {algorithm, machine learning}

3. hardware → tech explicitly modified

4. mobile {mobile}

5. web {computer, web}

6. not specified

0. N/A

99. others → commercially available tech such as smart watch

**T3/Civic tech owners: Tech Owners - for the tech in T1**

\* Section: Abstract, Methodology

\* Priority (all)

1. academics → current or previous research

2. companies → commercially available tech

3. governments

4. communities

5. organisations

6. general citizens

7. not specified → general tech (e.g., internet, email)

0. N/A

99. others

**T4/Design method: Design principles used in the tailor-made tech for the tech in T1**

\* Section: Abstract, Methodology

1. iterative design → repeatedly assess the tech and improve it accordingly

2. user-centered design → design by thinking about the users

3. participatory design → involving the users in the design process

4. value sensitive design → consider the humane values

5. co-design

6. speculative design

7. research through design

8. design fiction

0. N/A

99. Others

**D1/Funder: Provide monetary support**

\* Section: Acknowledgement

1. schools

2. governments

3. foundations

4. companies

5. physical community groups

6. virtual community groups

7. organisations

8. networks

0. N/A

99. Others

**D2/Partner: Provide non-monetary support**

\* Section: Acknowledgement

1. schools

2. governments

3. foundations

4. companies

5. physical community groups

6. virtual community groups

7. organisations

8. networks

0. N/A

99. Others