A document for my notes on Alan Turing sources. Some terms used here include "Entscheidungsproblem" (German for "decision problem").

Most documents here come from the Turing Digital Archive from Kings College Cambridge.

1 General/Uncategorized Sources

[3] Long-form biography of Alan Turing. Good explanation of concepts included within Turing's work. Poor citation of sources not drectly quoted.
[5] Alan Turing's early most notable paper, which laid the groundwork for computer science. It effectively proved that a machine or algorithm that can always conclusively say if something is computable or not is impossible.
[6] A blueprint of a machine that appears to be intended to graph the Riemann zeta function ($\zeta(s) = \sum_{n=1}^{\infty} \frac{1}{n^s}$) for some complex s.

2 Church and Lambda Calculus

This would encompass a paper about Alonzo Church's influence on theoretcal computer science through his solution to the Entscheidungsproblem.

1. [4] Appears to be from Turing's early return to Cambridge
2. [1] Alonzo Church's paper on the Entscheidungsproblem appearing slightly before Turing's On Computable Numbers [5]
3. [5] Alan Turing's paper with a solution to the Entscheidungsproblem. Some versions include an appendix comparing Turing's solution to lambda calculus solution by Church
4. [2] Church-Turing Thesis is a foundation of Theoretical Computer Science

3 Obituaries

A lot of sources are just post mortem documents of or related to Turing. It could be used to answer a question of how Turing was regarded among his contempoaries towards the end of his life or over time after his death. Since Turing's death was as a result of suicide and came after an attempted treatment of homosexuality[3], these could be used to look into that as well.

1. Many documents under AMT-A-1 in the Turing Digital Archive[1]

[1] `https://turingarchive.kings.cam.ac.uk`

References

[1] Alonzo Church. "A Note on the Entscheidungsproblem". In: *The Journal of Symbolic Logic* 1.1 (1936).

[2] B. Jack Copeland. "The Church-Turing Thesis". In: *The Stanford Encyclopedia of Philosophy*. Ed. by Edward N. Zalta and Uri Nodelman. Winter 2024. Metaphysics Research Lab, Stanford University, 2024.

[3] Andrew Hodges. *Alan Turing: The Enigma*. Simon & Schuster, 1983.

[4] Alan M. Turing. "Letters from AMT to MHAN [Professor Max Newman] (c. 1940) mostly about Church's "calculus of λ conversion" but also about "ordinal logics" and Church's theory of types. + 1 unsent to Church". Courtesy of Kings College Cambridge's Turing Digital Archive. 1940.

[5] Alan M. Turing. "On computable numbers, with an application to the Entscheidungsproblem". In: *Proceedings of the London Mathematical Society* 42.2 (1937).

[6] Alan M. Turing. "Zeta function machine". A blueprint of what appears to be a machine ot graph the Zeta function. 1939.