

# HW1: MNIST Exploration

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## I Introduction and Overview

## II Theoretical Background

## III Algorithm Implementation and Development

## IV Computational Results

## V Summary and Conclusions

## VI Future Work

## VII References

- 1: Seattle Animal Shelter. Seattle Pet Licenses. Seattle, WA: Department of Finance and Administrative Services, February 28, 2019. Electronic. February 2019. <https://data.seattle.gov/Community/Seattle-Pet-Licenses/jguv-t9rb>
- 2: United States Census Bureau / American FactFinder. “2013-2017 American Community Survey 5-Year Estimates” 2015-2018 American Community Survey. U.S. Census Bureau’s American Community Survey Office, 2017. Web. 1 March 2019 |<http://factfinder2.census.gov>.
- 3: Di Donfrancesco, Brizio et al. “Consumer Acceptance of Dry Dog Food Variations.” *Animals* 4.2 (2014): 313–330. Crossref. Web.

- 4: “How Much Does a Cat Cost?” Petfinder, 21 Sept. 2017, [www.petfinder.com/pet-adoption/cat-adoption/how-much-does-a-cat-cost/](http://www.petfinder.com/pet-adoption/cat-adoption/how-much-does-a-cat-cost/).
- 5: “How Much Does a Dog Cost?” Petfinder, 21 Sept. 2017, [www.petfinder.com/pet-adoption/dog-adoption/how-much-does-a-dog-cost/](http://www.petfinder.com/pet-adoption/dog-adoption/how-much-does-a-dog-cost/).

## VIII Appendix A

## IX Appendix B

### IX.I Approach

count	...	Cat	M.H.I	zip	year
100	...	1	58000	98107	2017
200	...	0	58000	98107	2017