

# Andrew Cheng

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Github: <https://github.com/acheng416>

## WORK EXPERIENCE

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**Aresty Research Center Summer Science Program – Rutgers University**

**Jun. 2019 – Aug. 2019**

*Research Assistant*

*New Brunswick, NJ*

- Collaborated with peer instructor on recombinant protein expression and purification
  - Induced expression of chlamydial RNA polymerase core enzyme in *E. coli* using IPTG
- Determined protein-DNA binding using ChIP assay
- Constructed agarose gels for DNA isolation and SDS-PAGE gels for protein purification

## PROJECTS

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*Programming:*

- **Maze Pathfinding** (Python)
  - Applies variations of the A\* search algorithm to robotic pathfinding in complex mazes
- **Digit Classification** (Python)
  - Implements Naïve Bayes Classifier and the Perceptron to classify handwritten digits
- **Macronutrient Calculator** (Java)
  - Recommends an optimized diet given a list of foods and macronutrient constraints using linear optimization

## EDUCATION

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*Rutgers University, New Brunswick, NJ*

*(2018-2022)*

**Bachelor of Science in Computer Science**

**Bachelor of Arts in Biomathematics**

- GPA: 3.86/4.0

## RELEVANT COURSEWORK

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*Mathematics*

- |                           |                        |                                   |
|---------------------------|------------------------|-----------------------------------|
| ▪ Intro to Linear Algebra | Multivariable Calculus | Elementary Differential Equations |
| Linear Optimization       | Theory of Probability  |                                   |

*Computer Science*

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|---------------------|----------------------------------|-------------------------------------|
| ▪ Data Structures   | Intro to Artificial Intelligence | Introduction to Discrete Structures |
| Systems Programming | Computer Architecture            |                                     |

*Biological Science*

- |                   |          |                   |
|-------------------|----------|-------------------|
| ▪ General Biology | Genetics | Organic Chemistry |
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## SKILLS & INTERESTS

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- **Skills:**

*Technical:*

- Python, C, Java, R, PCR, DNA purification, Protein expression, Cell Culturing, SDS\_PAGE gel construction, Agarose gel construction