

# CHARLTON CALLENDER

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## SNAPSHOT OF QUALIFICATIONS

I am interested in applying quantitative and computational tools to public health, medicine and science. I am able to quickly learn new skills for different projects like the HTML & CSS I used to create this resume. Also, through my work at Fred Hutch, I've gained experience using computational and quantitative tools to answer scientific questions.

## SKILLS

Python • JAVA • MATLAB • R • GitHub • Command Line • HTML • CSS  
Jekyll • Dynamodb (noSQL Database)

## EDUCATION

University of Washington

September 2012-June 2016

- B.S with Interdisciplinary Honors in Microbiology
- Minor in Applied Mathematics
- Current GPA 3.7

## RESEARCH EXPERIENCE

Undergraduate Research Assistant

September 2015-present

Bedford Lab at Fred Hutchinson Cancer Research Center

Seattle, WA

- Validating results from summer project that protein stability is selected for during influenza evolution
- Using Dynamodb (noSQL database) to streamline stability project workflow
- Learning HTML, CSS & JavaScript to add protein stability data to Dr. Bedford's nextflu.org

Undergraduate Intern

June 2015-August 2015

Bedford Lab at Fred Hutchinson Cancer Research

Seattle, WA

- Part of the Summer Undergraduate Research Program (SURP)
- One of 25 students selected from a pool of over 400 applicants
- Under mentorship of Dr. Trevor Bedford, used Python, GitHub, FoldX and the command line to investigate protein stabilities affect on influenza evolution
- Attended weekly professional development workshops and collaborated with other members at Fred Hutch to get advice on project

Undergraduate Research Assistant

March 2014-May 2015

UW Environmental Engineering Laboratory

Seattle, WA

- Under the mentorship of Dr. Heidi Gough and Ph.D. student Nicolette Zhou, helped investigate the use of bacteria to improve removal of pharmaceuticals from wastewater
- Maintained and monitored bioreactors using DNA extraction, qPCR, LCMS and other methods
- Earned the Mary Gates Scholarship and presented at the Undergraduate Research Symposium

## EMPLOYMENT EXPERIENCE

Video Operations Assistant

August 2013-December 2015

University of Washington Athletic Department

Seattle, WA

- Helped lead team of eight students in recording football, soccer and basketball athletic practices and games for coaches and players to reference
- Trained staff on camera equipment and sport specific recording techniques

Cashier and Clerk  
Marketime Foods Inc.

May 2012-December 2012  
Seattle, WA

- Provided exceptional customer service
  - Established relationships with regular customers
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## PRESENTATIONS

UW Undergraduate Research Symposium May 15th 2015

- Title: Augmentation of BPA-degrading bacteria improved removal during wastewater treatment
- Authors: Charlton Callender, Heidi Gough, Nicolette Zhou

Fred Hutch Cancer Research Center SURP Poster Session August 14th 2015

- Title: Investigating protein stability's effects on influenza evolution
  - Authors: Charlton Callender, Orr Ashenberg, Richard Neher, Jesse Bloom, Trevor Bedford
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## AWARDS AND HONORS

Mary Gates Research Scholarship March 2015

- Competitive \$4000 UW scholarship promoting student participation in research
- Earned the scholarship based off my work in the UW environmental engineering lab

UW Interdisciplinary Honors September 2012-June 2016

- Graduate with Interdisciplinary Honors
- General education requirements satisfied with interdisciplinary, small seminar-style classes with emphasis on developing analytical reading and writing skills

UW Quarterly Deans List January 2013-September 2015

- GPA of 3.5 or higher to qualify, achieved every quarter except my first quarter
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## RELEVANT COURSEWORK

Math: Linear Algebra, Differential Equations, Numerical Analysis, Mathematical Modeling

Computer Science/Statistics: Computer Programming I, II, Statistical Methods, Probability

Science/Medicine: Medical Bacteriology, Genomic Informatics, Medical Virology

Interdisciplinary Honors: Disability/Normalcy, Science in Context, Leadership & Democracy

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## COMMUNITY SERVICE

Volunteer Tutor January 2013-April 2013

Chinese Information and Service Center Seattle, WA

- Helped elementary students with their homework and English skills
- Improved communication and teaching skills by having to explain concepts multiple ways

Volunteer Assistant Teacher 2007-2012

Beginnings Schools Seattle, WA

- Helped the teachers at the preschool I used to attend over my summer breaks
  - Supervised and played with preschool students
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## PERSONAL INTERESTS

- Playing baseball, soccer, football. Active sports spectator
- Enjoy exploring Japanese culture and expanding on my Japanese language ability