

# Christopher Tastad | Resume

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## Education

### Bioinformatics, MS

University of Minnesota, Bioinformatics and Computational Biology

Capstone: Copy number variation in ovarian cancer from single cell and whole exome sequencing data.

Minneapolis, MN

Dec 2019

### Biochemistry, BS

University of Minnesota, College of Biological Sciences

Minneapolis, MN

May 2011

## Skills

**Languages:** R, BASH,  $\text{\LaTeX}$ , SQL, HTML, CSS, XML, JSON

**Platforms:** Linux (Ubuntu, RHEL, CentOS), git, Nginx, Apache, HPC, AWS, Docker, Oracle, WordPress

**Packages:** rmarkdown, shiny, ggplot2, dplyr, jsonlite, DT

**Genomics:** samtools, bwa-mem, bedtools, Seurat, VarScan2, Excavator, DNACopy, parallel, SummarizedExperiment

**Algorithms:** Hidden Markov model, FastCall

**Statistics:** Hypothesis testing, Simple/Multiple/Poisson Regression, A/B Testing, Contingency Testing, ANOVA, Survival Analysis, K-means, PCA, K-nearest neighbor

**Benchwork:** DNA/RNA/protein isolation and analysis, western blotting, PCR, ELISA, luciferase, immunostaining, histology, epigenetic analysis, FACS, mammalian cell culture

## Experience

### Graduate Research Assistant

University of Minnesota Dept. of OBGYN, Starr Lab

Minneapolis, MN

May 2019 — Present

- Executed full stack rewrite of cancer gene web app: deployed new framework, reduced codebase, removed need for SQL database.
- Applied bioinformatic focus into copy number variation on a largest of its kind single-cell sequencing human cancer dataset.
- Developed pipeline to automate analysis process from raw data to figures, incorporating HMM and FastCall algorithms.

### Load Planning Engineer

United Parcel Service, Industrial Engineering

Minneapolis, MN

Oct 2018 — Present

- Primary authority in guiding all load functions for 112 outbound doors; mediating hub, feeder, and engineering priorities.
- Advance district level interests through industrial engineering technologies for operational, flow, and system analysis.
- Generate daily cost savings through identification and elimination of trailer runs which average to a value of \$500-1000.

### Supervisor

United Parcel Service, Small Sort

Minneapolis, MN

Oct 2017 — Oct 2018

- Managed a team of 35 employees in largest operational unit in the Northern Plains District HQ sort hub.
- Delivered an immediate 15% production increase to area within first month (representing 40% of daily volume).
- Developed novel improvement projects leading to elimination of package missorts and training with disability access.

### Package Sorter

United Parcel Service

Minneapolis, MN

June 2017 — Oct 2017

### Graduate Research Assistant

National Marrow Donor Program, Bioinformatics

Minneapolis, MN

Jan 2016 — July 2017

- Employed scientific method as an investigator in a corporate R&D department with a focus in hematological cancers.
- Took both basic and clinical approach to investigation in cell therapy, immunology, and organ transplant genetics.
- Aided development of initiative around IP generation using existing company technology and 13 million patient database.

### Biorepository Technician

National Marrow Donor Program, Research Repository

New Brighton, MN

Sept 2014 — Jan 2016

- Conducted specimen processing in high-throughput clinical laboratory facility, processing 1000s of samples per day.
- Managed 300k patient database and long-term storage for FDA and Clinical Trials Network samples using GLP.
- Contributed to larger registry activities maintaining Be The Match patient-donor sample receiving, storage, and typing.

### Banquet and Dining Server

Minneapolis Club

Minneapolis, MN

Oct 2013 — Sept 2014

- Performed setup, service, and take down for dining room and banquets ranging from chef's table dinners to events of 500+.
- Trained in the manner of French service and hospitality to maintain an elite level of accommodation and experience.
- Participated in maintenance and building upkeep when called upon by external departments.

**Co-founder***Face to Face Organics LLC.***St. Anthony, MN***July 2012 — Jan 2014*

- o Co-founded a personal care products start up that connected social activism with our product and its use.
- o Deployed company's operating software stack on limited budget with minimal upfront cost or sustained overhead.
- o Established company systems around e-commerce, CRM, distribution, logistics, accounting, sales tracking, and inventory.

**Research Associate***The Stem Cell Institute, Asakura Lab***Minneapolis, MN***Dec 2007 — Jan 2013*

- o Performed basic science research with a focus in skeletal muscle development, receiving 4 co-authorships.
- o Well versed in full spectrum of molecular biology, histology and cell biology wet lab techniques and diagnostics.
- o Authored significant writing efforts for group manuscripts and major grant awards, including a successful R01 bid.

**Teaching Assistant***University of Minnesota, CBS BIOL2004***St. Paul, MN***Sept 2009 — May 2012*

- o Led teaching lab that included an integrative, research-focused curriculum, highlighting significant independent discovery.
- o Consistently called on by course instructor for consultation in the improvement of course materials and curriculum.
- o Received highest rating among all course TAs as indicated by students in post-semester evaluations for 2012 year.

**Founder, Lobbyist, and Chairman***Minnesota Student Legislative Coalition***Minneapolis, MN***Oct 2009 — July 2012*

- o United leaders from all 5 U of M campuses to form the active student lobby, earning the University's endorsement.
- o Directed wide range of issues: education funding, loan rates, textbook pricing, campus safety, and veteran accreditation.
- o Trained and supervised a team that guided the authorship of 4 student-specific bills during 2012 state legislative session.

## Personal

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**Hobbies:** Racquetball, Self-hosting software, CAD design & 3d printing, Camping, Fishing, Hunting, Reading

### Volunteering

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**IT Consultant***Trinity Lutheran Church of Montevideo***Montevideo, MN***July 2017 — Present***Youth Camp Racquetball Coach***University of Minnesota, Recwell***Minneapolis, MN***July 2017 — July 2017***Child Life Specialist***Shriner's Hospital for Children***Minneapolis, MN***Dec 2008 — May 2013***IT Consultant & Umn Chapter Co-founder***Ducks Unlimited***Edina, MN***Nov 2008 — July 2011***EMT***University Emergency Medical Services***Minneapolis, MN***Oct 2008 — May 2010***Trauma Ward Aide***Student Travel and Exposure South Africa***Cape Town, South Africa***June 2009 — July 2009*

## Publications

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- [1] **Tastad, C. T.** and M. Verma. RefSearch: A tool to more accurately identify normalization candidates for RNAseq analysis. *Manuscript in preparation*, 2019.
- [2] Y. Nakamura, Y. Asakura, B. A. Piras, H. Hirai, **Tastad, C. T.**, M. Verma, A. J. Christ, J. Zhang, T. Yamazaki, M. Yoshiyama, and A. Asakura. Increased angiogenesis and improved left ventricular function after transplantation of myoblasts lacking the MyoD gene into infarcted myocardium. *PLoS ONE*, 7(7):e41736, 2012.
- [3] S. Watanabe, H. Hirai, Y. Asakura, **Tastad, C.**, M. Verma, C. Keller, J. R. Dutton, and A. Asakura. MyoD gene suppression by Oct4 is required for reprogramming in myoblasts to produce induced pluripotent stem cells. *Stem Cells*, 29(3):505–516, Mar 2011.
- [4] H. Hirai, M. Verma, S. Watanabe, **Tastad, C.**, Y. Asakura, and A. Asakura. MyoD regulates apoptosis of myoblasts through microRNA-mediated down-regulation of Pax3. *J. Cell Biol.*, 191(2):347–365, Oct 2010.
- [5] M. Verma, Y. Asakura, H. Hirai, S. Watanabe, **Tastad, C.**, G. H. Fong, M. Ema, J. A. Call, D. A. Lowe, and A. Asakura. Flt-1 haploinsufficiency ameliorates muscular dystrophy phenotype by developmentally increased vasculature in mdx mice. *Hum. Mol. Genet.*, 19(21):4145–4159, Nov 2010.

## Awards

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<b>Advocate of the Year:</b> University of Minnesota Alumni Association	<i>Oct, 2012</i>
<b>Spirit of MSA (MVP):</b> Minnesota Student Association	<i>May, 2012</i>
<b>Highest Rated TA:</b> CBS BIOL2004 Lab Students	<i>May, 2012</i>
<b>Research Fellowship:</b> Gregory Marzolf Jr. Foundation	<i>Sept, 2009</i>
<b>Distinct Honor — Presenter's Award:</b> LHI/SCI Building Muscle and Blood Conference	<i>Oct, 2009</i>
<b>Undergraduate Research Opportunity Grant:</b> University of Minnesota	<i>2008, 2009, 2011</i>