

# Jonathan Mares

Aspiring Biomedical Engineer

## contact

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## languages

English mother tongue  
Russian & Hebrew  
fluency

## programming

Java, Python, Ocaml  
C, Objective C  
Matlab

## Libraries/ Tools

FILL

## objective

My professional goals are to use my problem solving skills to improve the quality of human life.

## education

2011–2015 **Bachelor** in Chemical and Biomolecular Engineering Cornell University, Ithaca, NY  
Pursuing Minors in Music and Computer Science

2014 **Certifications** Coursera  
Introduction to Data Science

## experience

2014 **Novartis Vaccines** Holly Springs, North Carolina  
*Technical Development Intern*

- Supported development to define a pilot scale oil-in-water emulsion process
- Participated in experimental planning, execution, data compilation, and presentations
- Supported analytical characterization (HPLC, particle sizing) of emulsion

2013 **IPS- Integrated Project Services** Somerset, NJ  
*Engineering Intern*

- Assisted Commissioning and Project Delivery teams at the Integra Life-Sciences Manufacturing job site
- Aided Engineering Design team with AutoCAD drawings and process flow calculations

2011-2012 **Hi-Tech Pharmacal** Amityville, NY  
*Validation and Technical Services Intern*

- Conducted surface area calculations of process equipment (kettles, tanks, agitators, pumps, etc.)
- Calculated product transfer line and filler machine volumes and Initiated protocol to optimize the filling process of products

## research experience

2013-2014 **Putnam Lab Group** Cornell University, Ithaca, NY  
*Undergraduate Researcher*

- Assisted with project: Reversibly Reactive Hydrogels for the Local Release of Protein Therapeutics
- Conducted UV/Vis Spectroscopy, Hydrogel degradation, protein release, and swelling analysis,

## coursework

**Chemical Engineering:** Fluid Mechanics | Heat and Mass Transfer | Chemical Engineering (ChE) Thermodynamics | ChE Kinetics | Analysis of Separation Processes | Process Dynamics and Control Theory | Honors Physical Chemistry I & II

**Biomedical Engineering:** Introduction to Biomedical Engineering (BiomE) | Molecular Principles of BiomE | Cellular Principles of BiomE

**Computer Science** Java Programming and Data Structures | Computer System Organization and Programming | Data Structures and Functional Programming | Discrete Structures | Networks | Introduction to Matlab | Introduction to iOS Development

**Music:** Jazz Improvization I & II | Music Theory I |

## **activities and interests**

**Organizations:** Cornell Univeristy Jazz Ensemble | Kappa Sigma National Fraternity

**Music:** composition, classical and jazz | piano, trumpet, saxophone, drums, vibes, trombone | performance groups

**Other:** volleyball | soccer | motorcycles/bicycles | watersports | standup comedy

## **publications**