

JANE STUDENT

SUMMARY

Chemical Engineering Student with hands-on bio-processing and general processing engineering experience. In addition: HVAC, solar and wind technologies, and extensive leadership experience. Seeking a full-time position.

EDUCATION

Michigan Technological University

Houghton, MI

B.S. in Chemical Engineering

Expected Spring 2016

Cumulative G.P.A. of 3.04 | Department G.P.A. 3.20

ENGINEERING EXPERIENCE

Alternative Energy Enterprise and Chemical Engineering Department

Jan 2015 - Present

Project: Biomass Fast-Pyrolysis Pilot Plant

Objective: Pre-commission and conduct start-up of the 1-kg/hour biomass fast pyrolysis system in order to produce bio-oil, conduct chemical characterization, and analyze energy demands. Currently working on designing, fabricating, and testing a new heating element for the fluidized bed reactor.

- Diagnosed programming inconsistencies within the LabVIEW process control program
- Tested unit operations, and made recommendations leading to improved mass transfer within fluidized bed reactor
- Designed and implemented modifications to volumetric feeder, resulting in a 92% increase in gas flow recovery
- Conducted start-up run and produced first bio-oil sample
- Identified reactor heat transfer complications through computation of theoretical convective heat loss limiting the fast-pyrolysis reaction

Undergraduate Research Assistant - Chemical Engineering Department

May 2015 - Present

Project: Life Cycle Assessment of Renewable Jet Fuel Made From Oil Seeds

Objective: Perform cradle to grave model of CO₂ and greenhouse gas emissions for the production of renewable jet fuel made from oilseed biomass.

- Calculated inputs and developed CO₂ and greenhouse gas emissions model in SimaPro 8.0
- Constructed webinar presentation to outline the life cycle stages and allocation factor impacts for the other research groups on the project
- Currently drafting manuscript with graduate student and faculty advisors to be submitted for publication on the Life Cycle Assessment of renewable jet fuel made from oil seeds

LEADERSHIP

Biofuels Team Leader and Safety Chair - Alternative Energy Enterprise

Jan 2015 - Present

Main liaison between Chemical Engineering research group, faculty advisers, and student biofuels team.

Advocate for lab safety awareness and responsible for conducting lab inspections. Held meetings with department Safety Manager and enforced lab clean-ups to improve Enterprise safety culture.

Engineering Scholars Summer Youth Program Instructor

Summers of 2014, 2015, and 2016

First Year Engineering Learning Center Coach

Spring 2014 and 2015

Teaching Assistant | Engineering Fundamentals 1100 and 1102

Spring 2014 and 2015

EXTRACURRICULAR ACTIVITIES/HOBBIES

- Avid Equestrian and Equine Trainer
- One of the original founding members of the Houghton Hoopers student organization
- Performed in two Michigan Technological University Visual and Performing Arts Productions
- Nordic Skiing

COMPUTER/TECHNICAL SKILLS

- UniSim R440
- LabVIEW
- SimaPro 8.0
- SuperPro Designer
- Process Design
- Biomass
- Bioprocessing
- Life Cycle Assessment
- Biofuels
- Alternative Energy
- OSHA Compliance
- Standard Operating Procedures
- Plant Process Commission
- Heat and Mass Transfer