

# VIET M. BUI

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CONTACT INFORMATION	<p>+1 (253) 226-3339 ✉ <a href="mailto:vietbui20@augustana.edu">vietbui20@augustana.edu</a> 📄 <a href="#">GitHub</a> 📄 <a href="#">Personal Portfolio</a></p>	<p>Augustana College 639 38th St Rock Island, IL 61201, USA</p>
RESEARCH INTERESTS	<ul style="list-style-type: none"><li>· Applying computer-mathematical modeling into renewable systems and materials, and evaluate their theory through simulation and analysis.</li><li>· Instrumentation and automatic operation of environmental station and energy system.</li></ul>	
EDUCATION	<p><b>Augustana College, Rock Island, IL USA</b></p> <p>B.A. in Engineering Physics <span style="float: right;">Anticipated May '24</span> B.A. in Computer Science <span style="float: right;">Anticipated May '24</span> Minor in Mathematics <span style="float: right;">Anticipated May '24</span> <i>Advisor:</i> Prof. Joshua Dyer, Prof. Forrest Stonedahl <i>Selected Courses:</i> MATH-340 Mathematical Modeling, PHYS-401 Intro to Quantum Mechanics, PHYS-377 Electronic &amp; Magnetism, MATH-399 Numerical Methods Modeling <i>GPA:</i> 3.8/4.0</p>	
RESEARCH EXPERIENCE	<p><b>Water Quality Research Station With Automated Vertical Profiling</b> <span style="float: right;">Jun '22–present</span> <i>Undergraduate Researcher</i> – Augustana College</p> <ul style="list-style-type: none"><li>· Designed and constructed the BuiBuoy station (new water and meteorological research station) that will be used in Dr. Jackie Opfer's future research into Cyanobacteria</li><li>· Developed and built an automatic motorized reel to handle 20+lbs multiparameter sonde</li><li>· Troubleshoot and programmed code for remote communication between data logger and Arduino board used inside the station</li><li>· Field tested and analyzed the quality of data</li><li>· Submitted abstract to 2024 Annual APS Meeting in Minnesota</li><li>· <a href="#">View abstract here</a></li></ul> <p><b>Rigorous Coupled-Wave Analysis for Thin-film Solar Cells</b> <span style="float: right;">Feb '22–present</span> <i>Undergraduate Research Assistant</i> – Augustana College</p> <ul style="list-style-type: none"><li>· Translated mathematical language and transitioned Dr. Benjamin Civiletti's previous research in R into Python</li><li>· Applied Fast Fourier Transformation into the permittivity setup of a slice of solar cell</li><li>· Experimented the behavior of light interacting with square wave pattern grating</li><li>· Modeling light interaction with sinusoidal grating patterns in the thin-film solar cell section using linear algebra and matrices</li><li>· Planning to present on Augustana Symposium day, and publishing the work with Dr. Benjamin Civiletti</li></ul> <p><b>Quantum Optic Research</b> <span style="float: right;">Sept '23–present</span> <i>Undergraduate Physics Laboratory Research</i> – Augustana College <i>Data Acquisition Engineer</i></p> <ul style="list-style-type: none"><li>· Data acquiring a quantum optic research through investigating the measuring system led by Dr. James Van Howe</li><li>· Learned LabView through testing the previous data acquiring system</li><li>· Investigating the teleportation behavior of the entangled photons by altering a photon</li></ul>	
TEACHING EXPERIENCE	<p><b>PHYS:212 Foundational Physics II</b> <span style="float: right;">Fall '23</span> <i>Teaching Assistant Lab Session</i> – Augustana College, Prof. James Van Howe</p> <p><b>PHYS:152L Basic Physics II</b> <span style="float: right;">Spring '22</span> <i>Teaching Assistant</i> – Augustana College, Prof. James Van Howe</p> <p><b>PHYS:151L Basic Physics I</b> <span style="float: right;">Fall '21</span> <i>Teaching Assistant</i> – Augustana College, Prof. James Van Howe</p>	
GRANTS	<p><b>Augustana Summer Research Fellowship (Total awards: \$3,000)</b> <b>Augustana Study Abroad Grant at Holden Village, WA (Total awards: \$2,000)</b></p>	

HONORS AND AWARDS	<b>Total awards: \$122,300</b>		
	Augustana College International Presidential Scholarship (\$91,000)	Fall '20 – Fall '23	
	Augustana College Old Main Scholarship (\$16,274)	Fall '20 – Fall '23	
	Entrepreneurial Scholarship (\$800)	Fall '21 – Fall '23	
	H & L Kirtland Scholarship (\$13,826)	Fall '21–Spring '23	
	Autodesk Instructables Origami Speed Challenge First Prize (\$200)	Spring '22	
	MetroHacks 2021 2nd Place (\$200)	Fall '21	
	<b>Honors:</b>		
	Sigma Pi Sigma (ΣΠΣ) Inducted Member	May '23	
	alKhwarizmi (Computer Science Honor) Society Inducted Member	Mar '23	
SERVICE AND OUTREACH	MACRO Consortium	Feb '22–present	
	Augustana Google Developer Club Lead	Sept '22–May '23	
	Augustana Physics, Engineering and Astronomy Society (SPS Chapter)		
	Vice President	Sept '23–present	
	Head of Astronomy hosting AstroNight at John Deerer Planetarium	Sept '22–present	
	Secretary	Sept '21–May '22	
	Vietnamese Student Association Co-Vice President	Sept '23–present	
TECHNICAL SKILLS	<i>Python:</i> conda, jupyter, IPython (widgets), numpy, scipy, astropy, matplotlib, mayavi, PyWebIO, Tkinter, and more		
	<i>Other programming:</i> R, LabView, C, Java, MapBox GL, Visual Basic Net, Liquid-Jekyll, PHP, SQL, HTML & CSS, Markdown, shell/scripting (bash, zsh, Powershell), Xcode, Kotlin, ReactJS, JSON		
	<i>Methods:</i> Fast Fourier transform, Markov Chain Monte Carlo, Preconditioned Monte Carlo, rigorous coupled-wave analysis, Laplace transform		
	<i>Optical:</i> interferometer, spectroscopy, fiber optics		
	<i>Mechanical:</i> Tormach CNC, 3D printing, other heavy machinery		
	<i>Design:</i> Autodesk Inventor, Rhino 7, Adobe Photoshop, Adobe Illustrator, Figma, Blender 3D, PrusaSlicer		
	<i>Operating systems:</i> MacOS, Windows, Android		
	<i>Productivity:</i> VSCode, Git, GitHub Pages, LaTeX, SAOImageDS9, digital oscilloscope, Replit, RStudio, Eclipse, office applications		
	OTHER	<b>Augustana Web Guild</b>	Fall '22–present
		<i>Project Manager, Website Developer</i> – EDGE Center Augustana College <ul style="list-style-type: none"> <li>· Working in a team of project managers to correspond with 30+ local clients to deliver graphic &amp; web developing services, which help them reaching out to more potential customers</li> <li>· Maximizing and automating web editing by writing JavaScript for the back end of 5+ different websites</li> <li>· Using JSON for data managements to improve 2 school foundation and a non-profit organization websites' architecture</li> </ul>	
EMPLOYMENT	<b>Academic Support, Learning Commons Tutor</b>	Fall '21–present	
	<i>Physics, Computer Science, and Math Tutor</i> – Augustana College <ul style="list-style-type: none"> <li>· Tailoring tutoring sessions to address each student's weak areas and knowledge gaps in physics, CS, and Math</li> <li>· Encouraging students to think critically and apply physics, coding, and math concepts to develop strong problem-solving skills</li> <li>· Giving regular progress feedback to students and parents to highlight strengths and improvement areas</li> </ul>		
	<b>Resident Assistant</b>	Sept '21–May '22	
	<i>Residential Office</i> – Augustana College <ul style="list-style-type: none"> <li>· Demonstrated an emotional supporter, and a college mentor for an assigned freshmen group in residential hall</li> <li>· Collaborated and coordinated with other RAs on campus to facilitate safe college zone</li> </ul>		