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Absolute Galois groups of 2-adic fields, AI, and formalization

In 1982, Jannsen and Wingberg gave an explicit presentation for the absolute group of any p-adic field, as long as $p \neq 2$. I will describe the journey to completing this result by giving presentations for 2-adic fields. Along the way I will discuss my experiences with AI-generated solutions, different methods for verification of proposed solutions, auto-formalization in Lean and the Tau Ceti project, which is rapidly expanding into a formal library spanning all of mathematics.